

# **college** AND UNIVERSITY **business**

**DECEMBER 1955**

***Low-Cost Residence Hall***

***Preparing for the Tidal Wave***

***Unorthodox Investments Can Be Sound***

***Improving Financial Reports***

***Food Service by Contract***



STUDENT ROOM, ILLINOIS COLLEGE, JACKSONVILLE, ILL.

## WAKEFIELD GEOMETRICS

Another  
Installation



### Handsome School Foyer Is Lighted by Wakefield Recessed Beta Units

Providing access to both the old school and a new addition, this attractive foyer is another good example of the use of Wakefield recessed 2' x 4' Beta units to supplement daylight in an area where modern design calls for simple, unobtrusive but efficient luminaires. Beta units (1' x 4') were also installed in the corridors of the new addition.

The Rigid-Arch plastic diffuser distributes the light evenly, without glare or shadow. And when the lamps are unlit, the exclusive matte finish of the Beta diffuser prevents any mirroring of reflections from outside the window.

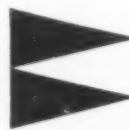
Beta, a recessed unit, and Omega, a similar unit for on-surface mounting, come in four sizes: 4' x 4', 2' x 4', 1' x 4' and 2' x 2'. You should have a copy of Catalog 55, which illustrates and describes in detail these and other Wakefield Geometrics.

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Electrical Contractor: Turner Electric Company, Port Huron, Mich.  
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WAKEFIELD PACEMAKERS, a fluorescent luminaire with the lighting component distributed about equally up and down, are shown in a typical classroom. 150 4 ft. Pacemakers were installed in 9 new classrooms. Write for a 4-page illustrated folder on the Pacemaker.



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*HOT SHOPPES, INC., owners and operators of the new Marriott Motor Hotel and a national restaurant chain, centered its executive and administrative activities in this new office building in Washington, D. C., early in 1955. This ultra-modern structure is SLOAN equipped.*



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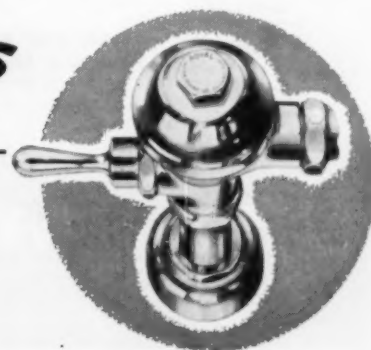
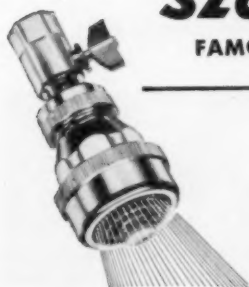
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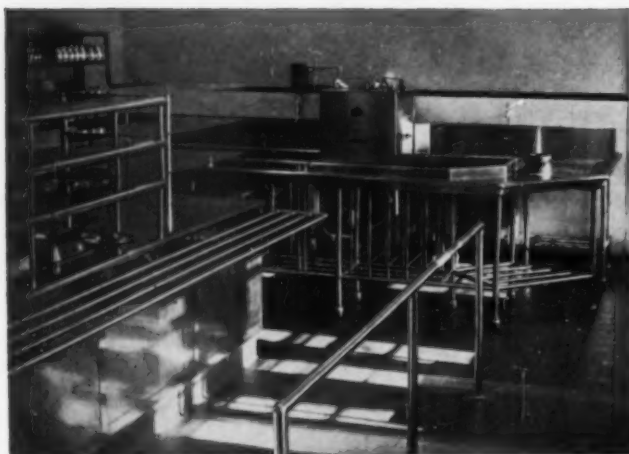
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# IDEAS

## from PROMINENT FOOD SERVICE INSTALLATIONS

**Famous Phillips-Exeter Academy features Blickman-Built equipment with novel heated serving shelves**



**STAINLESS STEEL DISH TABLES** (against wall)—small compact unit designed for efficient operation. Raised rolled rim prevents spilling of liquids on floor. Note all-welded stainless steel understructure and pear-shaped feet, which are adjustable. Cafeteria counter at left has cantilever brackets supporting plate glass shelves. This construction eliminates obstructions, leaves counter space free and minimizes dish breakage.

**STEAM-HEATED SHELVES** feature this stainless steel serving counter in Dunbar Hall. Loaded dishes placed on the shelves are kept hot and palatable while awaiting pick-up by waiters. Note the highly-polished, sanitary stainless steel surfaces. In the years to come, they will remain as bright and clean-looking as they do today.



● Phillips-Exeter Academy in Exeter, New Hampshire, renowned New England school, seeks every modern facility for the well-being of its students. The food service installations in Dunbar and Webster Halls reflect that policy. All welded, heavy gauge, stainless steel construction was selected for long service life and perfect sanitation. Every Blickman-Built unit was planned for labor-saving efficiency and for serving appetizing foods. Typical are the steam-heated serving shelves shown below—designed to keep loaded dishes hot and palatable. In terms of durability, sanitation and economical operation—it pays to invest in Blickman-Built food service equipment—the finest made.



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# college AND UNIVERSITY business

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## Among the Authors



J. Parker Hall

J. PARKER HALL, treasurer of the University of Chicago, outlines his philosophy on investments on page 23. In view of the substantial investment holdings of the University of Chicago, his observations are of particular interest to college executives. Mr. Hall has been treasurer of the university since 1946; prior to that time he had been associated with the investment firm of Clark, Dodge & Co., New York, for 11 years. He began his work in investments in New York in 1929, when he joined the staff of J. and W. Seligman Co. When investment problems are not too pressing, Mr. Hall enjoys horseback riding; he also has a reputation as a connoisseur of foods.



W. K. Pierpont

WILBUR K. PIERPONT, vice president in charge of business affairs at the University of Michigan, describes (p. 25) how that institution has worked out a system of improving financial reports so that they can be intelligently read by interested citizens. He has been in his present position since 1951, but first joined the University of Michigan staff as instructor in 1941. For a four-year period during World War II, Dr. Pierpont was a price analyst for the federal government and a naval officer, rejoining the University of Michigan staff as assistant controller in 1946. He completed his undergraduate work at Central Michigan College of Education at Mount Pleasant, and earned his master's degree in business administration and his Ph.D. at the University of Michigan.



LeRoss Morris

LEROSS MORRIS, director of physical plant at Denison University, Granville, Ohio, on page 43 outlines principles to be followed in setting up a program of preventive maintenance. Mr. Morris' work in building operation and maintenance has been entirely in the educational field, he having served 12 years as superintendent of buildings and grounds at Northern State Teachers College, Aberdeen, S.D., two years in a similar position in the school system of Keokuk, Iowa, seven years at Lake Forest College in Illinois, and six years at Drake University, Des Moines, Iowa, before going to Denison. He is a graduate of Iowa State College.



H. M. MacGregor

HOWARD M. MACGREGOR, treasurer-business manager and secretary to the board of trustees of Muhlenberg College, reports on page 45 on college food service operation by outside contractors. A 1934 graduate in business administration at Johns Hopkins University, he spent five years in investment banking, trust department activities, and general banking before associating himself with college business management. Mr. MacGregor has served as treasurer and business manager of Queens College, Charlotte, N.C., and as assistant treasurer and business manager at Agnes Scott College, Decatur, Ga. He went to Muhlenberg eight years ago. Active in civic affairs, he is particularly interested in boy scout activities. In moments of relaxation, he turns to television and sporting events.



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# QUESTIONS AND ANSWERS

## Quality of Instruction

**Question:** Is there any way to develop unit cost analyses so as to reflect the quality of instruction?—B.G., Ga.

**ANSWER:** In my opinion, there is no direct relationship between unit costs and quality of instruction.

Unit costs can be helpful in determining where the instructional dollar goes, but to say that an expensive program as measured in terms of unit costs is of higher quality than a lower cost program is a dangerous approach to the judging of quality of instruction.

A human element is involved in effective teaching that cannot be evaluated in terms of dollars and cents.—IRWIN K. FRENCH, *business manager, Wellesley College.*

## Maintaining Autonomy

**Question:** What steps can state universities and colleges take to maintain or recover the degree of autonomy necessary to their proper functioning?—L.P., Tex.

**ANSWER:** Autonomy for purposes of this question may be considered as the right of self-government, or freedom from excessive influence in three main fields: (a) state and political, (b) public, and (c) governmental.

Individualistic state constitutions and traditions have created a variety of organizational patterns in state supported institutions. Accordingly, there is no single answer, but here are some suggestions that may apply more directly to state universities than to state colleges:

1. Inclusion in the state constitution of an amendment, such as that of California (Article IX, Section 9), placing the control and administration of the university in the hands of the board of regents. The Strayer Report of 1948 states: "It is interesting to note that no state university is included in the usual lists of institutions distinguished by the quality of their scholarship, research and professional work, which is not vested by the constitution of its state with authority

which gives it considerable independence of the fluctuating and political influences of current legislative direction." This statement was reconfirmed in the "Restudy of the Needs of California in Higher Education, February 1955."

2. A governing board whose appointed members have terms of office extending beyond 10 years, but possibly no more than 20.

3. Maintenance of legislative representation, with administrative scrutiny of all bills introduced in the legislature. For example, during the last legislative session in California, 6747 bills were introduced, of which 241 affected the university.

4. Cooperation of an active, coordinated, well informed alumni association.

5. Willingness and ability of the governing board to combat any attempt at encroachment upon its authority even to the extent of court action.

6. Consideration of recently organized central state governing boards, such as those of Oklahoma, New York and New Mexico, as described in "Higher Education in the Forty-Eight States," Chapter 5, published in 1952 by the Council of State Governments.

7. Competent negotiation of sponsored research contracts.

8. Depending upon the circum-

stances, active participation in organizations such as (a) American Council on Education; (b) Association of American Universities; (c) Land-Grant College Association; (d) regional associations, such as Western College Association and College and University Business Officers' Associations; (e) National Federation of College and University Business Officers' Associations.—JAMES MILLER, *assistant to the vice president of business affairs, University of California.*

## Financial Assistance

**Question:** Shall we limit direct financial assistance at the undergraduate level to the needy only? To the ablest only? Who should receive loans?—A.E., Mass.

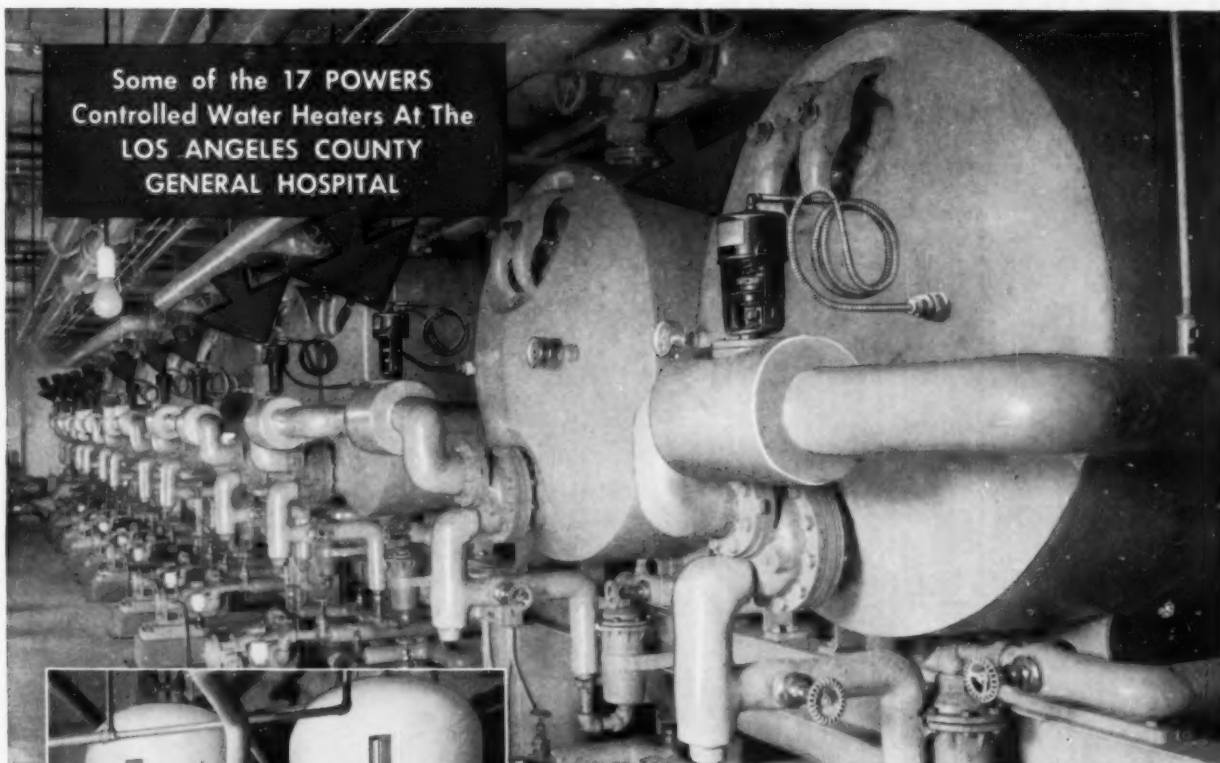
**ANSWER:** Direct financial assistance at the undergraduate level should be used to attract students who give promise of developing into the kind of graduates that the institution is endeavoring to produce. The simple fact that a prospective student is in need should not be reason enough for the granting of direct financial assistance, nor should the fact that a prospective student is not in need bar him from receiving assistance if in receiving this aid it attracts him to a particular institution.

Endeavoring to direct financial assistance to only "the ablest" is to undertake the impossible. It is impossible to recognize the ablest; they are only indicated as being promising, perhaps after being judged by the results of inadequate examinations and trial.

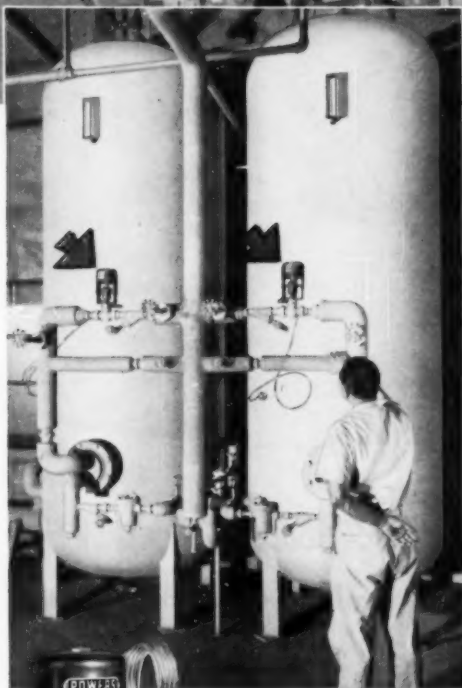
Financial loans should be made to undergraduate and graduate students upon the presentation of adequate evidence that without such borrowings they would be unable to continue their education. Loans should not be made to undergraduates until they reach upper-class status, for a student who cannot finance at least two years of college education would doubtless find a four-year program impossible.—T. N. MCCLURE, *business manager, Knox College.*

**If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.**

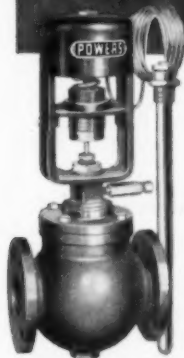
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Above: 1955 installation of Powers Controlled Water Heaters in Contagious Disease building. Contractor: E. Willardson Company.



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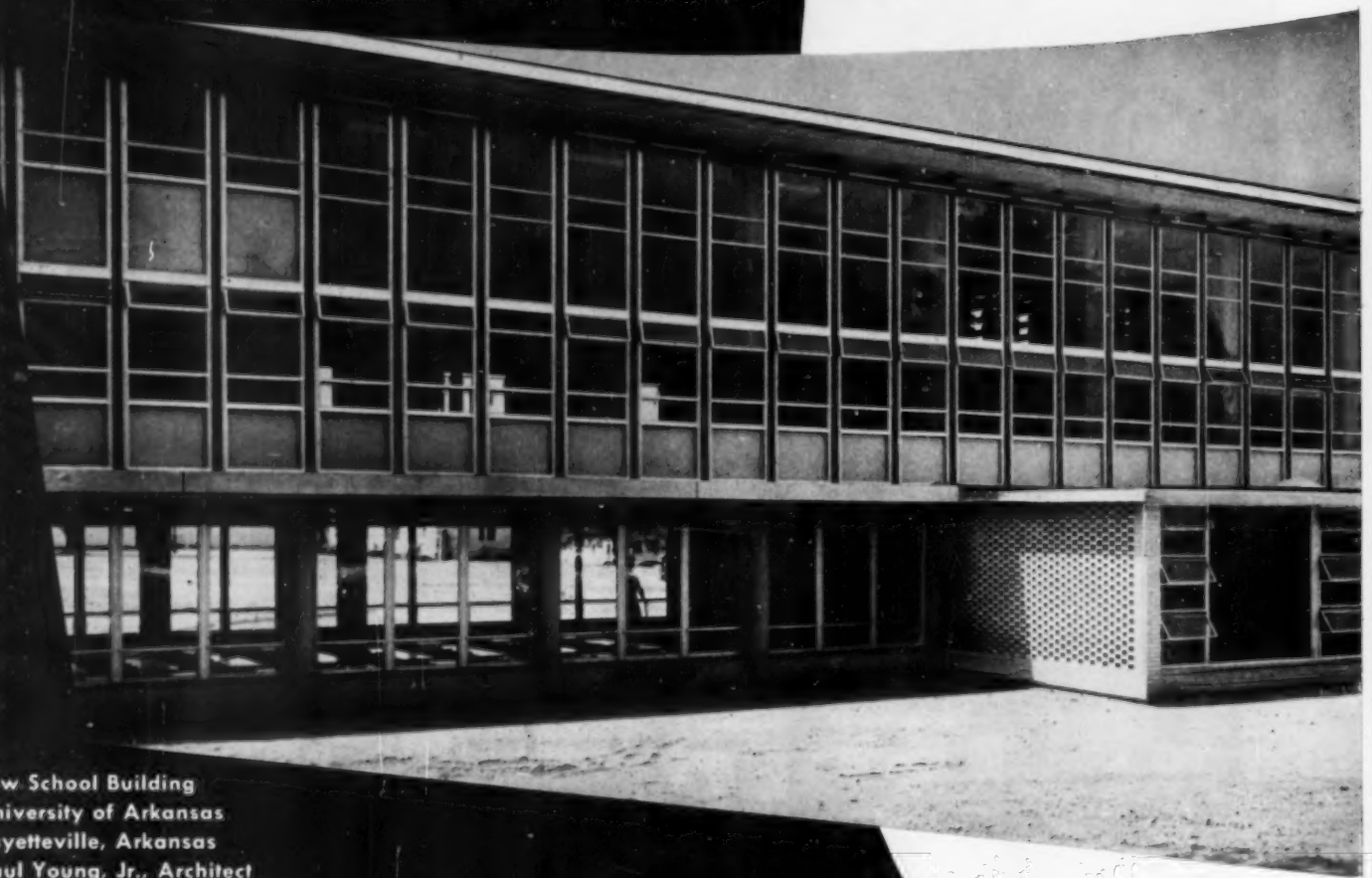


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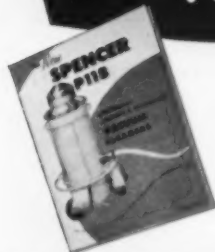
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## Operating in the Black!

CHARLES F. PHILLIPS

President, Bates College, Lewiston, Maine



IN RECENT MONTHS MUCH PUBLICITY HAS BEEN given to the operating deficits of private colleges. Perhaps the most widely quoted statistic is that 59 per cent of such colleges are "in the red," and, unfortunately, operating deficits are not restricted to private institutions.

The current widespread interest in college finances was evidenced to me when the Bates College treasurer's report was released last September. The phrase "for the tenth consecutive year Bates College has operated in the black" appeared as news in many papers—and led the editor of *COLLEGE AND UNIVERSITY BUSINESS* to ask me "how come?"

Part of the answer is found in our rejection of the philosophy that a little red ink is a good influence on potential donors. I still remember the lecture I received almost 12 years ago when I became a college president. It was delivered to me by a then-soon-to-be-retired president of a college in another section of the country. "Dig the foundation of a building. Get up a wall. Begin something—even though you go into debt for it. Then, let that unfinished building be your symbol to convince alumni and friends of the college that the college is in great financial need to finish it." He applied the same approach to his operating budget.

Despite the advice of my 12 year-ago adviser, Bates has not accepted this philosophy. So far as donors are concerned, we prefer to cultivate those who like to give to "winning teams," rather than those who like the "crisis" appeal. Those attracted to a college by a "crisis" may, I think, have their interest easily diverted elsewhere by a still greater crisis.

Put another way, a major step toward a balanced budget—whether it be a personal, institutional or governmental budget—is to accept the philosophy that it *must* be balanced, that the private college must operate in the black if it is to have a secure future. If that philosophy is accepted by an administrator, he is then ready to move in two directions: (1) to scrutinize and minimize expenses, and (2) to increase income, if the budget is still not in balance after expenses have been pruned.

On the expense side, there is one expense (and it is a big one) we cannot cut—faculty salaries. In

fact, here is a budget item that *must* grow each year. During the inflation of the last 15 years, the faculty member has become the "forgotten man." Despite some salary increases, his real purchasing power today is less than it was 25 years ago. If we are to replace today's faculty members with the quality we need for tomorrow, higher salaries are a "must."

With this single exception, however, nothing in the budget is sacred. While pinching pennies is never fun, it is essential in most colleges. And I am not referring just to the elimination of such obvious items as after-dinner-coffee-in-the-lounge, the offering of courses that attract but two to five students, and the operation of a large number of small dining rooms with separate kitchens. The cost of student promotion work, the number of telephones on the campus, the most economical fuel for heating, the expense items in the budget of each instructional department—these and many others demand close scrutiny. Without economies in these areas we will never achieve the essential higher faculty salaries. Frequently it is not a lack of knowledge of practical economies that keeps the budget unbalanced but of a will to put them into effect.

On the income side, one must always balance the need for greater income with the impact of higher tuition on students of limited means. At Bates, we have adopted a twofold direct approach to this problem: (1) advancing tuition when more income is necessary to balance the budget and (2) increasing the scholarship budget to aid those who cannot meet the higher rates.

It does not seem to me that a college need apologize for its tuition advances in recent years. In view of (1) rising family incomes, (2) availability of campus and summer jobs for students, and (3) financial aid to students, never before has a student found it so easy financially to go to college as today.

While the future of our private colleges depends in no small part on a steady and growing flow of money to them from alumni, friends and corporations, it also depends upon what we do within our own budgets. Moreover, what we do budgetwise also will be an important factor in encouraging the flow of funds to our institutions.

# Looking Forward

## A Southerner Speaks

"IT IS MY FIRM CONVICTION THAT ENFORCED SEGREGATION of the races in our public schools can no longer be justified on any basis . . . and should, therefore, be abolished as soon as practicable.

"Even though, as a white Southerner, I have since my early childhood taken for granted the practice of segregation, I can find now no justification for it; . . . the fact that we have practiced segregation on the assumption that it is right and just does not make it right or just."

These statements, and others incorporated in a speech, "Today's Decisions for Tomorrow's Schools," by Dr. Chester C. Travelstead, recently appointed dean of the school of education at the University of South Carolina, caused his discharge from the university, according to a news dispatch from Columbia, S.C., which appeared in the *Charlotte Observer*, Charlotte, N.C. Since his discharge, Dr. Travelstead has accepted an offer to become dean of the school of education at the University of New Mexico effective February 1.

The honest and forthright statements by Dr. Travelstead demonstrate that the truth is not always palatable. A university, which should stand as a shrine dedicated to the pursuit of truth, has been found lacking.

"Ye shall know the truth, and the truth shall make you free."

## White House Conference II

BECAUSE OF THE PRESSING URGENCY OF ELEMENTARY and secondary school problems, higher education was not given much attention in the recently concluded White House Conference on Education. The problems of higher education are critical, but the time of emergency is a few years off.

It would be folly for higher education to wait for the enrollment problem, full blown, to land on its doorstep. Might it not be wise for higher education to press for White House Conference II to be held sometime in 1957?

Critics of such a meeting have stated: "We have too many meetings now—why tack another one on to an overloaded schedule?" It is true that many meetings of academic and professional nature are scheduled for faculty and administrative staffs of higher education institutions. However, few if any such meetings have brought in the general public for a local or grass-roots review of higher education's problems. College and university fiscal and teaching problems will not come close to approaching a solution until the public at large

feels that it has a real stake in higher education's future. As the public becomes concerned, higher education will profit.

White House Conference on Education II need not become "just another meeting." It might well become the vehicle for higher education to utilize in achieving fiscal and academic solvency. It's worth considering.

## Trustees: Give or Get!

SOME COLLEGES AND UNIVERSITIES ARE SUFFERING under the handicap of having institutional policy determined by ineffective boards of trustees. Board members are enamored of the prestige attendant on the position but scare easily if work or philanthropy is involved.

The word "trustee," by dictionary definition, is "a person to whom property or the management of property is committed for the benefit of others." Frequently, in the management of property, it is necessary to supplement the normal income of the institution by a program of gift solicitation.

The trustee cannot honorably duck this responsibility or this assignment. He should not expect the president of the college or the director of the development program to shoulder the full responsibility. The trustee must go to work with both his money and energy. Personally he must give and he also must work assiduously at the task of influencing others to give.

A practical motto for the college trustee might be: "Give, Get, or Get Out!"

## A Good Press

HIGHER EDUCATION IS GETTING A GREAT DEAL OF attention by the editors of newspapers and national magazines. In general, it is a "good press." Though criticisms are heard on occasion, the vast majority of press coverage has been favorable to higher education.

Since this is true, it is imperative that college executives recognize the situation and make full utilization of such a sympathetic hearing. Now is the time to crystallize those nebulous ideas of your institution's future and welfare and to present them to the general public in graphic fashion so that the public may know what your school expects of it. A broad program, daringly and dramatically presented, will enlist the enthusiastic support of the public. A donor gives to what he understands and is interested in. Fire his imagination, and the job of donor cultivation is more than half done. More colleges fail in development work from timidity than from audacity.

Take time now to prepare for

## The Tidal Wave

C. S. HAVENS

Director, Physical Plant Department  
University of Illinois

WHILE HAVING REASONABLY ACCURATE data materially aids in planning for increasing college enrollments in the future, this knowledge proportionately increases our responsibility to plan well so the needed capacity can be made available when it is required.

Estimates of the future number of students must be translated into such terms as: increased floor areas for various functional types of instruction, acres of land, housing capacity, number of teachers, and funds required for construction and operation. Therefore, the purpose of this article is: (1) to outline procedures that can be followed in planning, and (2) to stimulate interest in continuing such studies in order that we may exchange information and improve planning technics for the future enrollment increase.

**The first step is to estimate the number of persons of college age in your state for each of the next 18 years.**

You may find this information already available either at your own institution or in some public agency within your state. Unfortunately, any data relative to one state are not applicable to another. If this information is not available for your state, an outline of a procedure that can be followed in preparing such estimates is given herewith. However, this is definitely a job for a demographer and a statistician, so don't even begin to attempt it yourself.

This step is fundamental to all planning; and even if you do not undertake the rest of this study, I believe that you will find the information not only interesting but useful in a num-

From a paper presented before the convention of the National Association of Physical Plant Administrators of Universities and Colleges, Laramie, Wyo., July 1955.

### How to Calculate Number of College Age Youths (Ages 18 to 21) in Any One State for 18 Years Into Future

(This Cohort Survival Method should be carried out only by a person trained in demography.)

Correct, when necessary, 1950 U.S. Census data on number of persons of each single age through 21 in state for following:

1. Under-enumeration of children, at least for ages from birth through age 4.
2. Error arising from 20 per cent sampling procedure for those single ages where complete count was not taken in Census.
3. Net gain or loss in population of state through age 21 resulting from migrations of college students in 1950.\* (Estimate distribution of this net number by individual ages.)
4. Loss in total population of state through age 21 resulting from service in armed forces. Allow for individuals from all states who were stationed in military camps within given state and who were therefore included in its total population (both civilian and military).

To corrected Census data, add number of live resident births in state each year since 1950 corrected for under-registration. Birth data for each 12 month period should extend from April 1 of one year to March 31 of following year to correspond to year used by Census in determining ages of individuals.

Project these population data for single age groups from Census and from birth records one age and one year at time by application of latest life tables available for state. Allow for continued improvement in survival rates in future years.

Allow, as projections are made, beginning with 1950 and extending into future, for net gain or loss at each single age resulting from (a) population movements that involve foreign countries, and (b) population movements between states.

Project each single age group until it reaches age 21. From resulting data, calculate number of individuals of ages 18 to 21 in each year of projection.—EDWARD F. POTTHOFF, director of Bureau of Institutional Research, University of Illinois.

\*Story, Robert C.: Residence and Migration of College Students, 1949-50. Misc. No. 14, Office of Education, Washington, D.C., 1951.

ber of ways. If time or funds are not available to make such a study, the data in the publication "The Impending Tidal Wave of Students"<sup>1</sup> can be used profitably.

**The second step is to estimate your enrollment share of the persons in the college age groups during each of the next 18 years.**

This is another problem that I suggest you persuade a statistician to undertake.<sup>2</sup> In this step you may find

<sup>1</sup>Report of Committee on Special Projects, American Association of Collegiate Registrars and Admission Officers, October 1954, p.6.

<sup>2</sup>Those interested in the various technics employed at the University of Illinois may write the author.

differences of opinion because certain judgment factors have to be applied, and it is only natural that we shall not all be in agreement. These judgment factors concern the following: (1) the percentage of persons in this college age group within your state who will enter college; (2) the percentage of persons in the group, both within and from outside your state, who will enter your institution.

In reference to the second factor, a conservative basis for an estimate would be to assume that your institution will continue to take only the same per cent of the total college age group it has experienced in the past. You may ultimately find that this per

cent will prove to be too low, but it would be difficult for others to offer, at this time, a more practical assumption.

You will probably find that all institutions in the state will not assume their proportionate share of the increase in college enrollment. One factor that may create this difference is the extent to which private institutions can — or are willing to — increase their capacities. Generally speaking, the responsibility for accommodating the increased enrollment rests equally upon both public and private institutions, because in the nation as a whole the division of enrollment between them is on a 50-50 basis. To the extent that such institutions do not assume their share, the responsibility of public institutions will be increased.

For the public institutions, the state legislatures in the end will determine the extent of expansion. However, it is our responsibility to see that the legislature has: (1) the facts; (2) the estimates of increased capital and operating costs, and (3) an approximate time schedule specifying when such facilities, and in turn the money for them, will be needed. If such information is in the hands of the proper authorities and then the necessary facilities are not provided, public criticism should not be directed against us.

#### **SUGGESTIONS OFFERED**

In presenting these estimates of increased enrollment, may I offer the following suggestions:

1. Do not be disappointed if the public does not become immediately excited, because public opinion is slow to react and often needs time to grasp the full significance of all facts. There is real danger in trying to move too far ahead of public opinion when we must rely upon public favor and acceptance to carry out our planning most effectively.

2. The increase in enrollment is being felt now by the grade schools and high schools. It is only fair that funds should first be allocated to finance such institutions before allocations are made to colleges.

**The third step is to estimate the enrollment capacity of existing facilities.**

This probably is the most important step in the entire study because: (1) if estimated carefully, it offers an

opportunity to increase enrollment to a maximum without the construction of new buildings, and (2) it will determine the extent and distribution of the additional facilities needed to meet the subsequent increases in enrollment for which you wish to plan.

The simplest way to determine the enrollment capacity of existing facilities is to assume a certain floor area per student for the institution as a whole. While following such a procedure may be useful for some purposes, it does not indicate the capacity by colleges and departments, which is essential if the planning is to meet the needs resulting from enrollment increases. Nor does it help to increase the use of existing facilities if that has to be done. Moreover, this required floor area varies greatly with the type of program carried on by an institution. Classes that do not involve laboratories require much less space per student than those for laboratory instruction. Colleges of, say, commerce and liberal arts need much less space per student than colleges of engineering and agriculture. The best guide for a given institution is its own experience; data based on general averages from the experiences of other institutions are of little value and should not be used.

Another way of estimating is that of basing the enrollment only on the availability of the total classroom space, thereby disregarding laboratories and staff offices. This procedure is practical only if classroom space represents a high percentage of the total facilities.

#### **ILLINOIS' EXPERIENCE**

In our experience at the University of Illinois, we are finding that to establish a single capacity for an institution as a whole has value only in relating the university's physical growth to the total enrollment. A single capacity in itself is not sufficient to determine the specific location of congested areas or to give direction to either campus expansion or capital expenditures. We are more interested in where shortages exist and where space exceeds need. These objectives require calculating the capacity for each college and department, a procedure that we are trying to develop and apply. Of course, this requires both more work and greater expense, but such a procedure can be helpful in:

1. Increasing space utilization.
2. Correcting space deficiencies,

which may be "bottlenecks" preventing enrollment increases.

3. Determining direction of plant growth.

4. Providing a long-range campus plan for buildings and grounds.

5. Encouraging educational planning.

If applying this procedure enables you to do even one of those things listed, the expenditure will prove to be a worth-while investment.

One phase of analyzing capacity is that dealing with the present utilization of space. I believe that sufficient attention has not been given to increasing the use of existing facilities. We all have a moral obligation to make the greatest use of existing facilities consistent with good educational policies and procedures. Furthermore, the greater the sum spent on new construction, the more funds will be required for operation and maintenance.

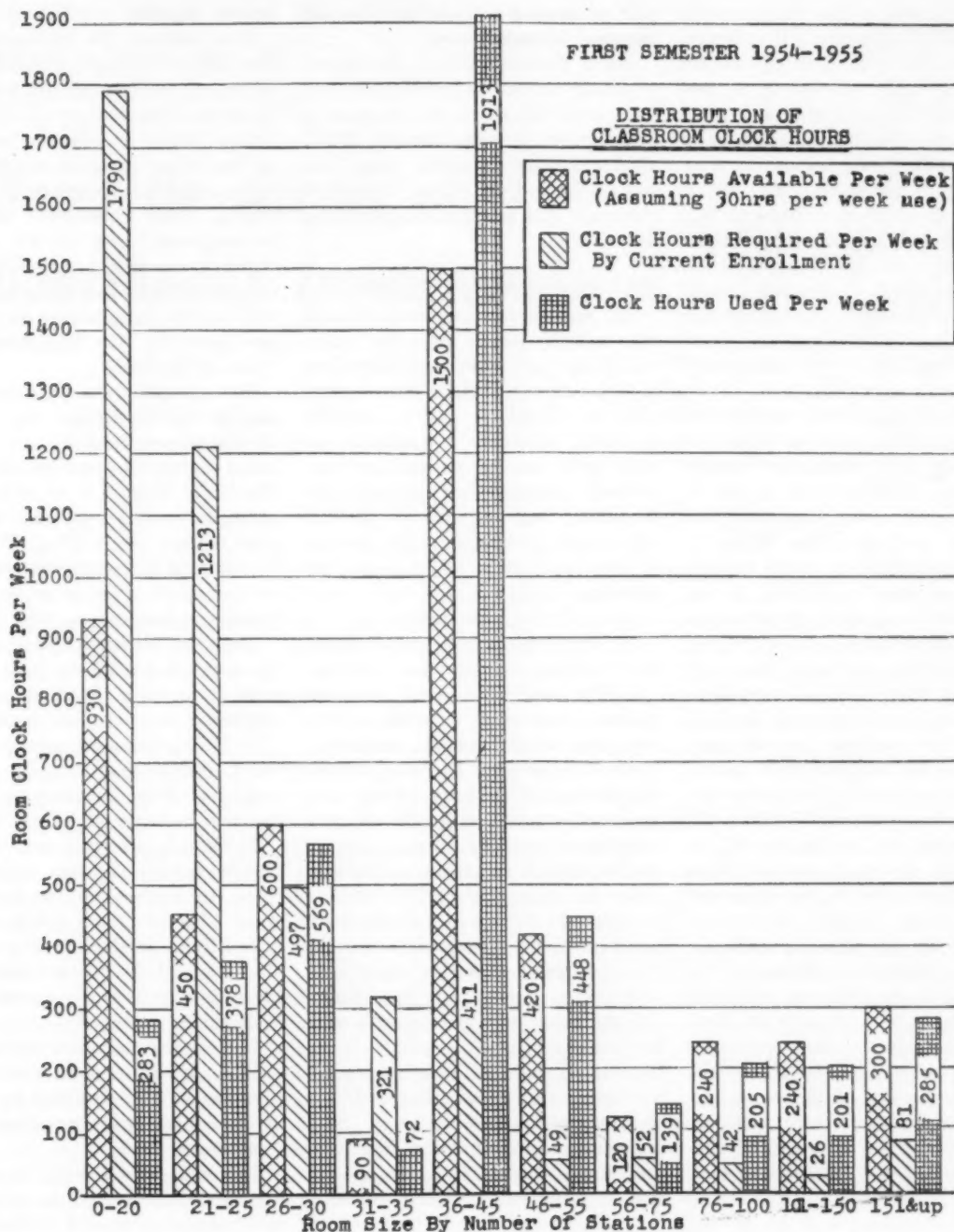
#### **OPINIONS DIFFER CONSIDERABLY**

You will find a considerable difference of opinion as to how intensely existing facilities should be used. For example, the layman or the legislator will probably contend that such space should be used from 44 to 48 hours per week, but I dare say that a study of the use now made of your classrooms, lecture rooms, seminar rooms, and laboratories would reveal approximately half that number of hours. The academic staff can put up a pretty good argument that in general current use of existing facilities is reasonable from an educational point of view.

In large institutions, it often is assumed that the floor areas of classrooms, lecture rooms, seminar rooms, and laboratories represent a large portion of the total space; however, it's my guess that such functions would approximate from one-fourth to one-third of the total nonresidential net floor area.

Space usage of instructional facilities may be analyzed by correlating information on the demand, availability and actual use of rooms of various capacity ranges. (A hypothetical analysis of classroom type space is shown in the chart on the opposite page.) This type of analysis can be very revealing. A typical situation is an excessive number of large classrooms as compared to the number of small classrooms. Such an analysis might show that the building areas assigned to classrooms and laboratories are greater

Distribution of Classroom Clock Hours, First Semester 1954-55



than those needed to meet the normal size of the sections meeting in such rooms.

Assuming that you have collected the necessary data on the use now made of existing facilities, that you have in some way calculated the enrollment capacity, and that you are interested in making the best use of such facilities, you might wish to con-

sider the following policies and procedures:

1. Centralize in one office the responsibility for scheduling all classes, including laboratories as well as classrooms. However, since the persons in such an office cannot be expected to have complete knowledge of all factors that must be considered in scheduling classes in a large university,

the cooperation of the several colleges and departments is absolutely essential, and their participation in the establishment of policies probably will prove not only desirable but necessary.

2. Make greater use of available classroom space by: (a) avoiding forms of scheduling whereby one section blocks the use of the MWF sequence at two different hours of the

day; (b) examining very critically sections (usually quiz sections) which meet either one or two hours a week on the MWF sequence. (If a department feels that it has a strong case for continuing such scheduling, a real effort should be made to be sure these sections are given at such times as to make possible their fitting in with others); (c) increasing the use of the TTS classes in the forenoon; (d) increasing the use of the classroom space during the less desirable hours of the day (each department should spread its classwork throughout the daytime hours, including the noon hour when feasible); (e) using early morning or evening hours.

3. Since laboratories rarely are shared by departments, see that each department is responsible for making the correct decisions with regard to future use of these important and expensive teaching areas. When it appears that laboratory space for certain courses may be deficient, it may be necessary to schedule the afternoon use of these rooms on a 12-2, 2-4, 4-6 time basis for two-hour laboratory periods, or on a 12-3, 3-6 time basis for courses using three-hour periods. Often three two-hour periods may prove more advantageous from an academic and practical point of view than two three-hour periods.

4. Correlate the section size of the classes with the room capacity. Since the enrollment capacity may be further increased even though the average hours of use per week is relatively high, data should be collected on the enrollment in each section and compared with the room capacity. If, however, educational policy prevents increasing the section size to the approximate capacity of the room, the room can be subdivided. As an example, we at the University of Illinois recently found a classroom with a capacity of 130 being used for sections with enrollments of 35 to 40; we are now subdividing this room, thereby providing two classrooms and an office.

5. Upgrade the quality of space. Occasionally, basement and attic space, which may have been used for storage, if at all, can be upgraded through remodeling and made quite desirable.

We at the University of Illinois have not realized all the policies and procedures listed but we have started on them, and I sincerely believe that each of us could do more with existing facilities if we wished to do so.

**The fourth and last step is to estimate what additional facilities will be needed to meet the planned increase in enrollment.**

As a practical matter, educational planning should be undertaken and completed before much progress is attempted on physical planning. While this is a statement with which you will all agree, I am willing to venture the guess that it seldom happens that way.

#### EDUCATIONAL OBJECTIVES FIRST

We must at all times keep in mind that facilities merely serve the educational aims and objectives. Therefore, in planning for physical plant expansion, we should try *first* to establish a sound university organization in order to be sure that physical and educational planning are properly coordinated, and *second* to develop educational philosophies and policies to serve as a basis and a guide for planning.

In the latter, I include:

1. The aims and objectives in terms of education, research and services.
2. The establishment of planning policies concerning: (a) the university's share of the increased enrollment in the state or area; (b) the planned distribution of students among colleges and departments for the ultimate enrollment; (c) the average size of sections in both classrooms and laboratories for each course; (d) the individual teaching load for the staff members of the various departments; (e) the extent to which visual aids will change instructional procedures; (f) the extent to which research will be developed, particularly if it is to be financed from the same funds used for construction of teaching facilities; (g) the provision of university housing facilities for students, especially for married students; (h) the provision of university housing facilities for staff members; (i) the provision of recreational facilities, and (j) centralized *versus* departmental libraries.

All of the foregoing are needed to plan accurately for plant expansion. While I urge you to request this information, don't be surprised—or seriously disappointed—if you don't receive it. In my opinion, the lack of educational planning has been, and probably will continue to be, a very serious deficiency in trying to plan facilities for the future. You can't be held responsible if such questions are not answered, but you can if you

need the information and do not at least request it from the proper university officers.

Even without this information, you can prepare a rough estimate of the additional facilities needed, which will be better than none at all. If a university policy decision is not made on the extent to which enrollment is to be expanded, I suggest you assume that all other schools will take their proportionate share of the increase, and that your 1953 enrollment in each of the colleges and departments by 1971 will be increased by the percentage shown in "The Impending Tidal Wave of Students."

Having made these two assumptions and having determined the capacity of your present facilities, you can calculate additional space in two ways. The easier method is to estimate the additional space on the total building area (gross) per student. This may be based on the space you now have, or it may be adjusted to that space which you believe you will need.

The other alternative is to calculate the facilities needed by each department and college. I recommend this alternative over the first because:

1. This information should be collected ultimately in order to develop programs for the architects on each of the new building projects.
2. The departments and colleges require varying amounts of building space per student and, in turn, land areas. Therefore, such details will aid materially in developing campus planning, particularly in determining the adequacy of your land area and where it should be expanded.
3. Since this procedure will be more accurate, it will result in a better distribution of space and thereby reduce the additional space requirements to a minimum.
4. It will aid materially in estimating the capital cost of the expansion, as the various types of functional areas will be available on which to base such estimates.

While it may not be considered one of our responsibilities, I shall mention another major problem related to the increasing college enrollment. Even though it will probably be difficult to provide the necessary facilities, it undoubtedly will be still more difficult to obtain the necessary teaching staff. Therefore, in the over-all planning for the future, equal consideration and study must be given to the latter problem.

**You can often get a high rate of return  
at relatively little risk, so**

## ***Don't Be Afraid of Unorthodox Investments***

**J. PARKER HALL**

*Treasurer, University of Chicago*



Mr. Market is likely to let his enthusiasm or his fears run away with him.

I SHOULD LIKE TO ADDRESS A PLEA TO those of you who spend a substantial proportion of your time on investment matters. Business officers who, because of the press of other duties, are able to give only a little attention to investments should not become involved in the suggestion I am about to make. The suggestion is: Don't be afraid to be unorthodox. Bear in mind that "unorthodox" is not synonymous with "unsound." There are many novel and unusual investments that are perfectly sound but that are certainly not common or orthodox.

### **LEND STOCK TO DEALER**

At the University of Chicago we not infrequently lend stock to a dealer who for one reason or another may have gone short and wishes to borrow shares in order to deliver. In such a case the dealer deposits with us cash equal to 110 per cent of the market value of the stock. All dividends on the stock come to us as usual and, of course, we can invest the cash and make additional income from that. Finally, the borrower usually pays a fee of 25¢ or 50¢ a share on the stock borrowed.

Possibly in your metropolitan community, if you live in or near one, there is a shortage of parking facilities. Commercial banks and life insurance companies are prohibited from owning or lending on vacant land and yet, as all of us know, parking lots are frequently

very remunerative. The university has a number of attractive investments as an owner of, or as the holder of a real estate mortgage on, a parking lot. Because of the lack of competition, these afford a high rate of return with relatively little risk.

We have pioneered in the development of equipment trusts covering cars and trucks leased to companies of high credit standing in much the same way freight cars are leased to the railroads. Just recently we started leasing 8 foot in diameter neoprene containers, suitable for the transportation or storage of liquids or flowable solids, to a major chemical company at an attractive rate. Again, not being hemmed in by legal restrictions, we have been able to place real estate mortgages up to 100 per cent of the value of the property. Of course, we do this only when the credit of the lender is of top quality. The point is that a college or university can adjust its thinking to meet the peculiar requirements of a borrower.

Oil payments, ship financing, leasebacks, private placements, and numerous other unusual transactions are available to the enterprising endowment fund manager if he will keep an open mind in looking for sound but profitable deals. The nice thing about these investments is that they usually produce a fixed return higher than that available from bonds and provide reasonably rapid amortization so that funds are flowing back all the time for use as other opportunities open up. Recently we joined with others to put up a total of \$10 million of debentures

junior to \$12.5 million of first mortgage notes advanced by banks to finance the construction of an oil refinery in Puerto Rico. In addition to 6 per cent interest, we received a bonus of common stock in the enterprise which, if all goes well, could give us a capital profit of from 50 to 100 per cent.

### **HIGH PROPORTION IN EQUITIES**

Turning now to a few words of opinion about the current situation, I recognize that some of you with 20 or 25 per cent of your endowment in equity wish you owned more, and some of you with possibly 60 or 70 per cent wish you had less. No matter which position you are in, I think we would all quickly concede that most funds today have a proportion in equities that a few short years ago we would have considered to be very much on the high side. Even if we have not purchased common stocks in recent years, the appreciation in the market has put us in this position. Suffice to say, we have had a most extraordinary combination of favorable factors, both domestic and international, joining to produce a buoyant stock market. In view of our freedom from capital gains taxes, the question is what, if anything, we should do about our very large holdings of stocks.

Now, there are a number of philosophies of investment, such as buy and hold through thick and thin, or attempt to forecast major changes in investment trends, including interest rates and the stock market. A common-sense

From an address presented at the convention of the National Federation of College and University Business Officers Association, Estes Park, Colo., 1955.

approach that particularly appeals to me, after a long and sustained rise in stock prices, is to do a little chipping away at the proportion in equities, *i.e.* to do some selling as prices increase. I am not referring to any drastic action but rather to a feeling that we should get into a frame of mind of searching for individual issues that may have overstepped the bounds of reasonable value. In other words, I don't think this is the time to relax and enjoy the prosperity that is abroad in the land but rather a time to be especially alert to opportunities to prune our list, even though such a policy may make us look wrong for a considerable period.

Assuming we do some selling, what do we do with the proceeds? I hope the money can go into unusual situations that provide both a satisfactory fixed return and fair amortization, such as those of the type described, but more likely it will be placed in bonds, preferably with sinking funds. Fortunately, in the last year or so the yields on bonds have been increasing while the return on stocks has declined precipitously with the result that the spread in yield is much less than it has been in the recent past and, specifically, many high-grade stocks today yield less than high-grade bonds. Therefore, some switches can be made without loss of income.

#### LOW YIELDING BLUE CHIPS

Apart from diversification among different types of investments, by all odds the most perplexing problem facing investment managers today is what to do with our blue chips, many of which have risen in price to a point where the current return is only 2 per cent and in some cases under 1 per cent. No less than one-third in number of the University of Chicago's common stocks yield under 3 per cent. Do we sit with these holdings indefinitely regardless of price, or is there a figure at which we should be willing to sell and buy some other stocks?

There is no magic solution to this problem and in the last analysis the decision must be reached after an ex-

amination of all of the factors surrounding each holding. It is possible to make one or two general observations, however, which bear on the matter.

Obviously, it would be a mistake to take all equities yielding, say, less than 3 per cent and replace them with equities yielding more than  $4\frac{1}{2}$  per cent. Such a program carried on indiscriminately might well result in a portfolio of common stocks with materially reduced possibilities for growth over a period of time. I think one must have some high yielding equities mixed in with low yielding ones and the endowment manager should look at his portfolio and be sure that he is earning a return that compares within reason with that available on comparable well managed and diversified funds. A list of common stocks which in today's market yields  $3\frac{1}{4}$  to 4 per cent, for example, would appear to be reasonable and this despite the fact that it would be possible without too much difficulty to list 20 issues which return considerably more.

Another point is that, after a long period of business boom and at a time when the stock market is advancing, there is every inducement to trade down in quality to obtain a higher yield. We should be very sure of our ground before we do this. If, as a matter of policy, we buy second and third grade common stocks they may do somewhat better appreciation-wise in the last stages of a bull market but, if we are left with them when the tide turns, we quickly suffer.

The same point applies to fixed income securities, where at present the spread in yields between high grade and second and even third grade bonds is quite narrow. Currently we are witnessing a rash of convertible bonds and, if I may say so, of generally decreasing quality. In recent years there have been some convertibles of pretty good quality. However, because of the tax factor a number of companies have refunded their preferred stocks with convertible subordinated debentures which clearly are not of first-class char-

acter and recently there has been a splurge of convertibles of companies whose names I have not even heard of heretofore.

In summary, whether switching from blue chip common stocks into bonds and other fixed income obligations, or into other commons, beware of the temptation to sacrifice too much quality for yield. It rarely pays off for long.

#### INTRINSIC VALUE vs. PRICE

In trying to appraise "intrinsic value" of a security as against its price, I have found these two paragraphs of Ben Graham's book, "The Intelligent Investor," of particular help:

"Imagine that in some private business you own a small share that cost you \$1000. One of your partners, named Mr. Market, is very obliging indeed. Every day he tells you what he thinks your interest is worth and furthermore offers to buy you out or to sell you an additional interest on that basis. Sometimes his idea of value appears plausible and justified by business developments and prospects as you know them. Often, on the other hand, Mr. Market lets his enthusiasm or his fears run away with him, and the value he proposes seems to you a little short of silly.

"If you are a prudent investor or a sensible businessman will you let Mr. Market's daily communication determine your view as to the value of your \$1000 interest in the enterprise? Only in case you agree with him, or in case you want to trade with him. You may be happy to sell out to him when he quotes you a ridiculously high price, and equally happy to buy from him when his price is low. But the rest of the time you will be wiser to form your own ideas of the value of your holdings, based on full reports from the company about its operations and financial position. The true investor is in that very position when he owns a listed common stock. He can take advantage of the daily market price or leave it alone, as dictated by his own judgment and inclination."



Parking lots are frequently a remunerative investment.

# ***What Can Be Done to Improve Financial Reports?***

**W. K. PIERPONT**

*Vice President, University of Michigan, Ann Arbor*

FINANCIAL STATEMENTS SHOULD BE improved if colleges and universities are to get increased financial support from state legislatures, alumni, corporations and other business enterprises, foundations, parents of students, and other sources.

Educational institutions have increased their enrollments in the last half century at a much more rapid rate than population alone would warrant. In addition, as a necessary part of their teaching programs, universities now operate hospitals, research institutes and centers, farms and dairies, and many other activities. To house their students, the colleges build and operate residence halls and student

centers. These, along with intercollegiate athletics, create a sizable financial operation within any one fiscal year.

If the financial activities and operations of higher educational institutions are to be widely understood, a clear-cut and informative presentation of the sources of income, the nature of expenses, and the assets and liabilities must be made.

Financial reports of corporations engaged in business enterprises have

been improved markedly during the past two to three decades, and there is no reason why financial reports for educational enterprises should not be similarly improved.

As a first step, let us look at the present-day financial reports being printed and distributed by educational institutions. The typical financial report contains an introductory statement by one or more officials of the institution, one or more formal transmittal letters, an audit certificate of

The flow of dollars into and out of a college or university is only the financial reflection of the ongoing activities and achievements. Why not enliven the financial report with a picture, perhaps, of a research project under way, adding meaning to the expenditure for research.



a public accounting firm if the books and accounts are so audited, and a long series of financial statements, schedules and exhibits, often with no apparent order or reason for their inclusion. The print is often small and a seemingly universal desire prevails to present tables showing similar items for different funds all neatly arranged cross-ways of a single page or spread on a two-page layout.

Of course, certain of these statements, exhibits or schedules may be necessary to fulfill a legal reporting requirement. But I suspect that custom and the desire to maintain uniformity from year to year are more compelling reasons for what is now done.

#### CONTENTS OF FINANCIAL REPORTS

Let us take a good look at the contents of our financial reports, particularly at the detailed schedules and exhibits, and ask ourselves a number of questions. Why is it necessary to show all the changes, recorded in the ledgers, on every parcel of land, every building, or every piece of equipment included in the plant assets? Why show a statement of expenses by five, eight or even more classifications for every account or fund, which number into the hundreds? Why publish the income and expenses, and the beginning and ending cash balances of a whole series of small, insignificant operating activities for glass blowing, truck operation, postage meters, and instrument shops?

These data are generally required for internal control and supervision, and they should be prepared for managerial use, but they have no place in the financial report. Indeed, their inclusion provides a mass of information too great for a reader to comprehend, even if he is interested.

The first attempt at improving financial reports for colleges and universities should be along the line of reducing the amount of information given. To accomplish this effectively and with discrimination requires a careful and continuing study of the significance of various types of financial information. In some cases, a present schedule can be eliminated entirely without loss of value to the report. In other cases, a schedule in summary form may be much more enlightening than was the former detail. It is advisable to experiment with different arrangements of the information to be presented in an exhibit,

#### Classification of Expenses in General Funds, University of Michigan

Instruction and Research	Business Operation
Extension	Plant Operation, Alteration and Maintenance
Student Services and Aid	Plant Rehabilitation and Extension
Institutional Cooperation and Public Service	Annuity and Retirement
General Administration	

The first attempt at improving financial reports should be along the line of reducing the amount of information given. Above is an example of the expense classification used by the University of Michigan.

schedule or statement in an effort to obtain the most effective presentation for the reader.

Accounting-minded and accounting-trained persons recognize at a glance balance sheet data and income statement data and can interpret such different kinds of data as to their meaning and significance in various situations. The great majority of readers of financial reports of colleges and universities are not so trained. In some cases, assets are of real significance; in other cases, expense data are meaningful; in all cases, careful thought must be given to what is important information and how best it can be presented.

#### ENLIVEN PAGES

Second, the financial report should be made more inviting to the reader by opening it up. Larger type and more frequent paragraphing and indentations may be used; less should be placed on each page. Pictures of significant events during the year will add interest and understanding. Charts and tables, when used, should be easily read, contain significant data, and be limited to a few facts in each. Color, when properly used on covers, in pictures of students and buildings, or in portraying a research project, may be effective.

In trying to enliven the pages of financial information, it is possible to relate financial data to the main purposes of the institution: to teach, to carry on research, to provide public services of one kind or another.

The flow of dollars into and out of a college or university is only the financial reflection of the ongoing activities and achievements. Why not show, therefore, the number of students who received educational services during the year as the meaning

behind the expenditure of several millions of dollars? Dollars spent for research indicate the extent of the activity in financial terms, but a summary of what research has been carried on, or a picture of a research project under way, will also add meaning to the raw amount of dollars spent.

#### CAN ADD BETTER UNDERSTANDING

Certainly no one financial report can hope to present by story and pictures the never ending flow of services to the community from our educational institutions. Each year, however, properly prepared financial reports can add a little better understanding of the uses for which the income of the institution has been expended. Colleges and universities are enterprises to educate men and women for the successful discharge of their citizenship responsibilities and for professional careers, to further the knowledge of mankind through research, and for many activities related to these two primary functions. The financial report is one medium by which these fundamental objectives may be interpreted, in this case in financial terms.

Financial reports must be considered as only one of the ways in which a better understanding of an educational institution may be obtained. For this reason, the contents and scope of the financial report must be considered in the light of other publications. An improved financial report may be brought about if the particular objective of this report is clearly defined by the institution and if it takes its place among other publications.

Depending upon the circumstances in each college or university, financial reports may stress more or less the general activities of the year, the progress in plant expansion, increased

enrollments, or other information not stated in dollars and cents. I wish only to emphasize a coordination of the financial report with other publications so that its particular objective can be most effectively accomplished.

In the third place, every effort must be made to be sure that the report reflects the important characteristics of current financial data, particularly income and expense data. Income items may not be so troublesome with respect to changes over the years although the terms "Sales and Services" and "Educational and General" seem to me to be peculiarly unenlightening ones. The shift in the amount of restricted income as compared with state appropriation grants, student fees, or unrestricted income from other sources is one to watch, however. The amount and kind of restricted income and new sources of operating revenues should be carefully reflected in the manner in which income is shown from year to year.

#### **SIMPLIFY CLASSIFICATIONS**

A more important problem in this connection is the expense classification used to show the nature of the expenses of the institution. Currently, progress is being made by using new expense categories to present the broad classifications of expense data; further advancement is necessary.

This point may be illustrated by the continued use of the terms "General Administration" and "General Expense," when these items individually may account for possibly 5 or 10 per cent of total expenses. These two expense categories have grown over the years because certain new areas of expense have arisen in educational operations. The whole area of services to students outside of the classroom, in the form of admission coun-

seling, the activities of deans of men and women, religious counselors, student health officials, and others, is now a significant area of expense, and an attempt should be made to classify it separately from General Administration.

For other reasons, new items of expense have been incurred and, presumably because they are not part of some established expense group, they are added to the General Expense category. Some of these items, annuity and retirement costs, for example, now comprise a sizable expense item. In such case, the expense classification should reflect this current awareness on the part of the college of this personnel cost and should show such an expense item under an informative heading.

No attempt will be made to present an over-all classification of expenses that will meet the conditions stated. It is suggested, however, that new headings on the expense summary may include classifications for Business Operations, Student Services, and Annuity and Retirement. With a little careful scrutiny the General Expense category may be eliminated entirely.

General Expense categories usually are supported by a detailed schedule at a later point in the report. Oftentimes the reader may never find the second statement. If the information is of interest and helpful in understanding the financial data, it should be shown in the first instance.

Insofar as asset classifications are concerned, it is necessary to question the usefulness in today's financial reports of the term "Current Fund." In times past this term covered the assets used in everyday instructional and research activities of the institution. As the activities of a current operating nature became more diverse, the assets

of this fund became more and more limited to specific uses, either by agreement with the sources of the assets or by internal arrangement.

The growth of residence hall operations, for example, on a self-supporting basis brought into the Current Fund a large element of asset value that in many cases was pledged for the repayment of the debt incurred to construct the halls. As larger and more frequent gifts were obtained for specific operating purposes, the combined cash account shown in the Current Fund assets included large amounts of cash that were unavailable for general uses. If financial statements are to be as meaningful as possible in the first instance, there is little justification in combining cash restricted to specific uses with cash available for general purposes into one cash account. The resulting total of cash shown is not only meaningless but it may be misleading.

#### **CONSIDER TWO PARTS**

It may be helpful to separate the financial report into two parts. A short, simple, nontechnical report may be prepared for wide distribution, and a longer report, including the technical statements and schedules necessary to meet legal requirements, may be prepared for use in internal administration.

A number of educational institutions already have made encouraging progress in improving their financial reports. The improvement that has occurred so far has been accomplished by a number of different approaches to the problem and all of them may not have been uniformly successful. But progress is being made and more will be made if a sincere effort is put forth to improve each annual financial report.

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## *The Challenge to Liberal Education*

... has implications of serious significance for all of higher education. In the January issue the problems and issues discussed at the fall convocation of Trinity College will be presented in a special portfolio.

**Custodians at Texas Tech**  
pass 12 examinations to win

## ***Shoulder Patch***

**WILLIAM E. HALL**

*Director, Department of Public Information  
Texas Tech College, Lubbock*

EXAMINATION PLAGUED STUDENTS at Texas Technological College, Lubbock, get no sympathy from any member of the Tech custodial force. For the custodians have their own problems. Compared to the average student's five examinations, the custodians each take 12 "finals."

These examinations consist of 200 questions about cleaning materials and their uses, personal appearance, custodial responsibilities, and other duties normally required of the 54 man staff. They represent another major step in a campaign by Charles F. Libby, supervising custodian of buildings, to give Texas Tech the finest collegiate clean-up staff in the country.

A clue to the staff's current effectiveness is the 16.6 cents annual cleaning cost per square foot at Tech, compared to industry's average yearly cost of 53 cents per square foot.

Instead of a mortarboard, custodial "graduates" receive an attractive red and black "Double-T" shoulder patch for their uniforms. An 85 score for the series is required for a passing grade. Pride of the department is E. A. Overstreet, who made a perfect score on the 12 test series.

For weeks before the tests, all of the department's textbooks, trade magazines, and tape-recorded lectures were out on loan to members of the custodial force cramming for their examinations. However, they had been told that failure to pass the examinations on the first try would not jeopardize any man's job.

The examinations serve two basic purposes: to locate work areas in which custodians need more instruction and to stimulate pride in work well done.

The custodial staff is charged with

interior maintenance of the college's 49 permanent buildings and several war-surplus classrooms. "On the average, our custodians are responsible for about 14,600 square feet of area," Mr. Libby says. "These tests are designed to cover the materials they use and the usual jobs they perform."

Reponse to the tests is typified by this statement from William Van Meter, foreman:

"The tests are tough, but they surely do show how much there is to know

about these jobs. The most important thing is that winning the shoulder patch gives our people more pride in their work. Those who don't make a good grade the first time will study harder in order to make sure they get the patch on the second try."

High staff morale is indicated by the fact that the average Tech custodian has now been on the job for four and a half years. Salaries since 1949 have increased approximately 75 per cent.



S. M. Miller, foreman and high ranking student, displays his newly won shoulder patch for proficiency in examinations given Texas Tech's 54 man custodial staff. He is filling a hand pump with detergent to clean library windows which are covered with heavy screen wire.

# Now a "Motel" for Married Students

**New housing at Union College is  
inspired by popular tourist court**

**WILLIAM E. BLACKBURN**

*Superintendent of Buildings and Grounds  
Union College, Barbourville, Ky.*

IN THE YEARS FOLLOWING WORLD War II, Union College (a Methodist school of 500 students), like many other colleges, was the recipient of 25 trailer units, which were set up as temporary housing for married veterans. Being of a temporary nature, these units deteriorated and became unusable even though there was a continuing and an increasing need for housing units for married students.

The administration began to study the feasibility of permanent housing for married students. After discussing the matter in committee meetings, the trustees and college officials decided upon a housing unit comparable to the tourist court or motel, such a con-

struction to house 20 individual units, each consisting of a kitchen and dining area, a living room, a bedroom, and a bath. These units were to be housed in a U-shaped building, each unit facing a court in the center of the U.

To locate the housing unit was not simple. Our campus is fairly compact. A new physical education building and an extension of the men's dormitory were being considered at the time, so that sites for all three had to be taken into account. We knew that with a housing unit we would have to incorporate a laundry, and this, in turn, meant clotheslines. In many cases the families would have children, and space would have to be provided for

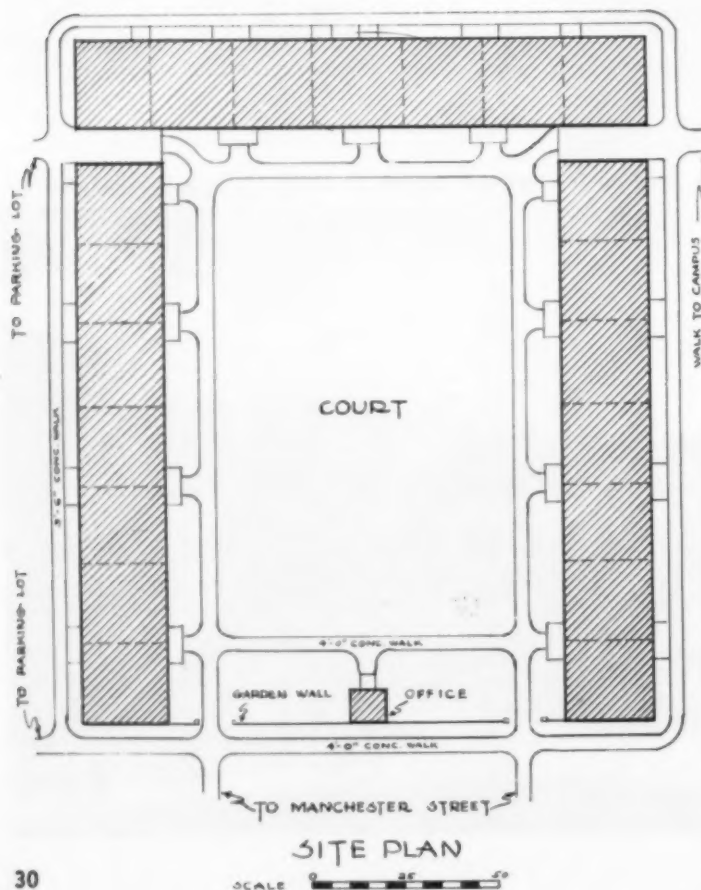
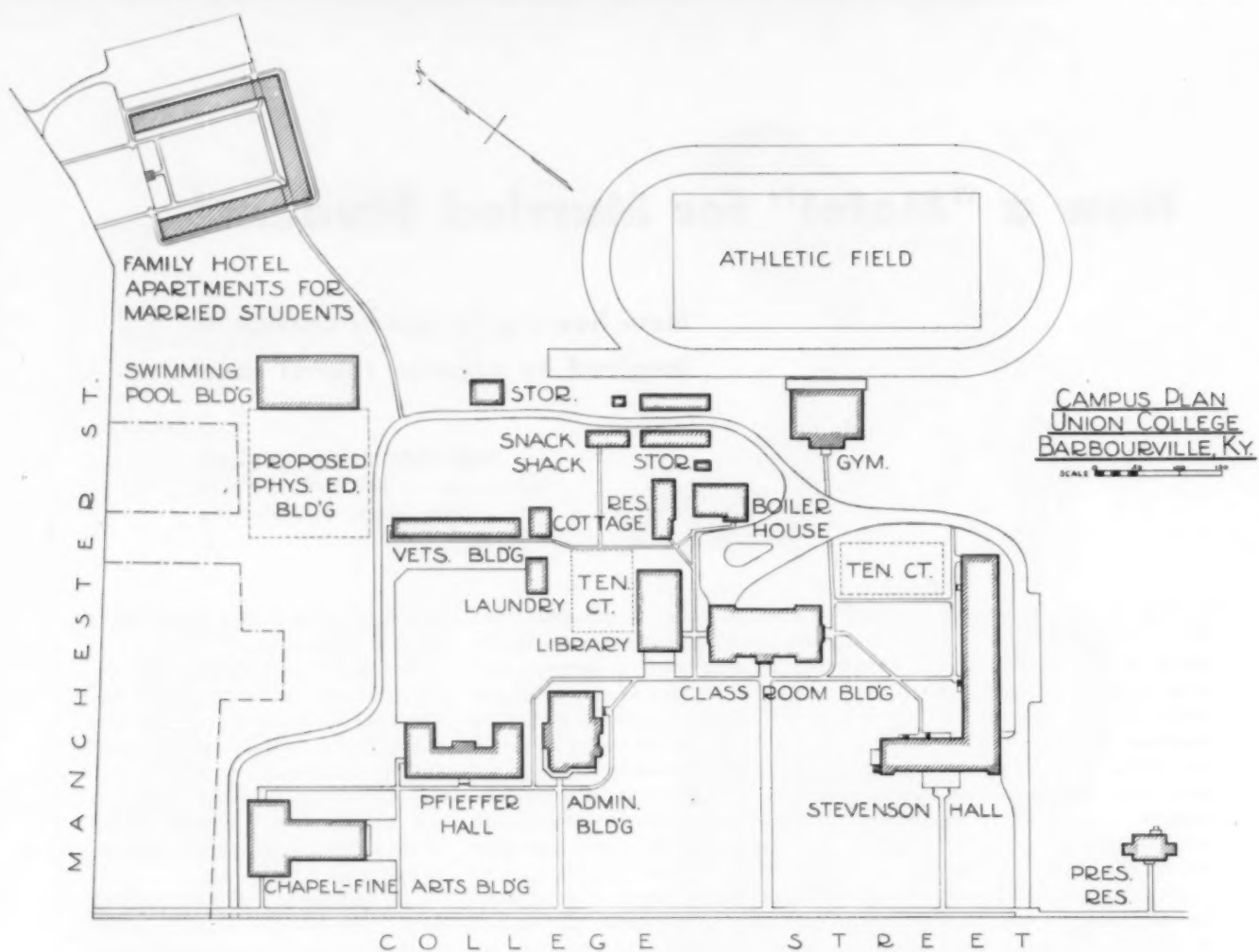
play without the dignity of the college campus' being upset.

Taking all these factors into consideration, we chose the present site. The front approach is in a residential district and is accessible without one's crossing or coming into contact with the campus. At the same time, it is near enough to have a walk leading to the campus, thus tying it into the general campus plan.

The decision to locate the building on this site brought with it a major problem. Barbourville is located in the Cumberland River Valley, and at times it feels the wrath and fury of the river. The site we had chosen is in the low area, and during the 1946

Twenty-unit apartment dwelling for married students at Union College, Barbourville, Ky.





flood, the worst in recent years, the site had been completely submerged. For some time flood control had been discussed locally and in Washington. At the time we were ready to build, there was no assurance that money would be appropriated for a flood wall so that we had to make our plans accordingly. This increased costs because of the additional height of the floor and because of the filling-in of the immediate area. In addition to this cost we found, after testing the ground, that our footings would need to be increased in width and strengthened with additional steel to form a satisfactory foundation. These items ran the cost of the unit up by \$10,000.

The building has been constructed of concrete block and brick. Inside walls and partitions are block; outside walls are block veneered with brick. The interior walls are painted but not plastered. Four basic color schemes for the apartments were alternated so that each apartment is different from its neighbor on either side. The painted

block walls are proving satisfactory and are quite pleasing to the eye after the furnishings have been assembled in the building and curtains placed at the windows. Trims and moldings enable the occupants to hang pictures, tapestries and the like by picture hooks and wire. Ceilings are plaster on metal lath, giving a one-hour rated ceiling, according to the Fire Underwriters Code. Roof rafters are wood, and the roof itself is asphalt shingle on wood sheathing.

The entire unit is heated by a central plant contained in the building. Gas-fired hot water heating is used, with baseboard radiation in living rooms and bedrooms and cast iron radiators in kitchens and bathrooms. Each wing of the unit is controlled by a mechanical device that regulates day and night temperatures. Hot water from a central source ensures instant hot water to all parts of the unit.

The wiring is in rigid conduit with a fuse panel in each apartment feeding from the main entrance switch located in the boiler room.

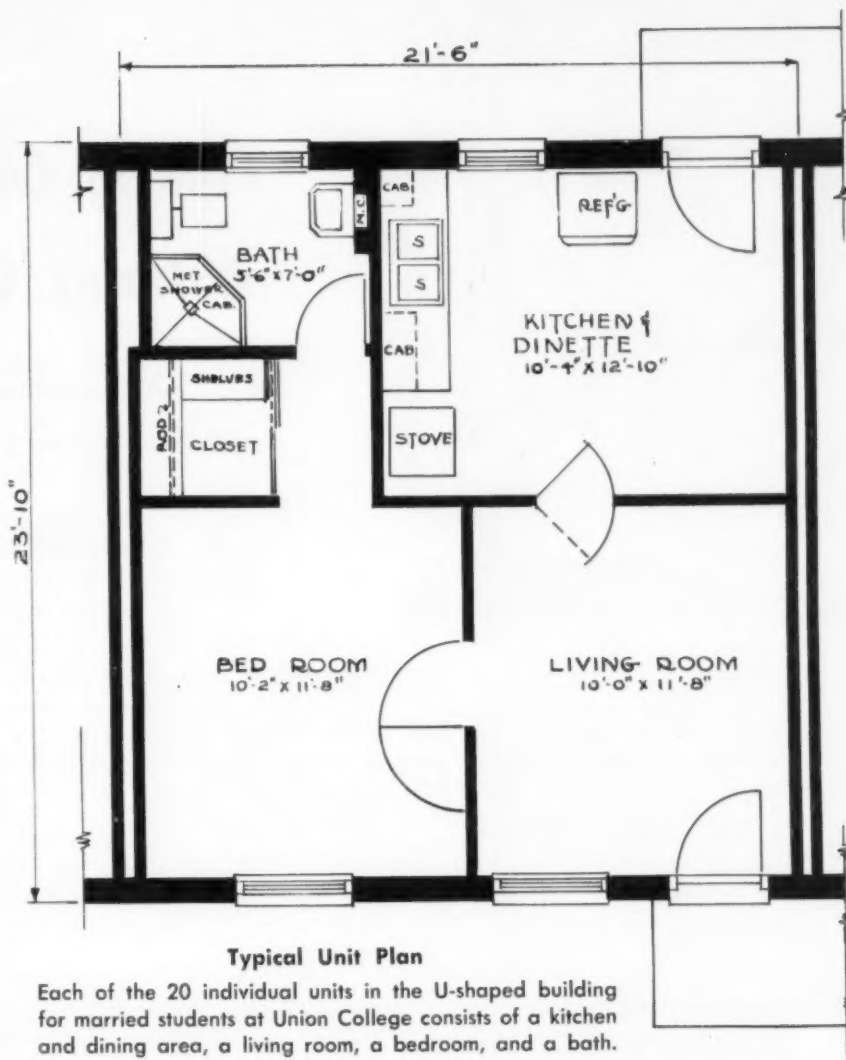
The kitchens are well equipped with built-in sink and cabinets. Other furnishings in the kitchen include a 7.3 cubic foot refrigerator, a 42 by 42 inch utility table and four chairs, and an apartment size natural gas stove with four burners and an oven. Just outside the kitchen door, an underground garbage can is available for each of the 20 units.

Living rooms are amply furnished with a lamp table, three overstuffed chairs constructed so that two or more of them can be pushed together to form a couch, a two-place study desk, and two straight-back chairs for use with the desk.

Bedrooms have a dresser-desk and mirror (used as a dressing table), a chest of drawers, a night stand, either one double or two single beds, and two straight chairs. Mattresses, pillows and mattress pads are included. The closet in the bedroom is 4 feet 4 inches square with clothing rod and shelf. Five apartments are equipped with single beds and 15 with double beds.

The three-piece bathroom has a built-in medicine cabinet over the lavatory, two towel rods, shower curtain, and clothes hooks.

Venetian blinds and curtain rods are furnished throughout the building. All furniture is of oak and is finished for half of the units in natural color and for the remainder of the units in walnut color. Tables, desks, dressers,



**Typical Unit Plan**

Each of the 20 individual units in the U-shaped building for married students at Union College consists of a kitchen and dining area, a living room, a bedroom, and a bath.

chests, night stands, and lamp tables have plastic tops resistant to heat and to most liquids; they are finished to match the wood. Floors are asphalt tile on concrete with patterns varying in the individual apartments.

The laundry unit has one pair of concrete tubs, two ironing boards of the commercial type, and two automatic washing machines. Washing machines are coin operated; occupants pay 25¢ per washing cycle for the use of a machine. Other facilities in the laundry unit are furnished without additional charge.

A small office building is located at the front and center of the U. At present, one of the students in the court maintains office hours a part of the day, acting as a liaison between business office, maintenance department, and residents of the court. The business office has cared for all records.

The total cost of this project, including additional filling outside of the contract and landscaping, was

\$176,821. Broken down, each unit of the 20 cost \$8,841.09, with \$1,345.33 of this amount going for furnishings. This figures down to \$16.68 per square foot of floor space. Included in the total cost are a septic tank and field (built at a cost of \$3,094.71), and all miscellaneous costs, such as insurance, freight on furnishings, and architect's fees.

Rental rates on these apartment units are \$35 per month with all utilities furnished. Garden space is available for the occupants at a nominal fee. The courts are within walking distance of the town, the shopping district, and the city school.

The building was officially named the College Courts and dedicated in October of last year. Since that time, a waiting list for occupancy has to be maintained. President Conway Boatman says that the only drawback to the housing unit as it now stands is that it is about one-half as large as it needs to be to meet the demand.



Photographs by Kransten Studio

## ***Low in Cost, but Without Compromises***

this new residence hall  
for men at Illinois College

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DESIGNED TO ENSURE RUGGED DURABILITY and ease and economy of maintenance, the new men's residence hall at Illinois College at the same time was planned to provide the most comfortable and attractive living accommodations that could be provided with the budgeted funds. In spite of the low cost achieved, no compromises were made with sturdiness of construction.

The site slopes southward from the campus, giving an unbroken distant view to the south over rolling meadows. It provides a beautiful outlook from the majority of student rooms and from the lounge.

Completed for student occupancy last year, this new residence hall has such amenities as rubber tile floors in student rooms, terrazzo and glazed tile

in shower and toilet rooms, and oak paneling and a large brick faced fireplace in the lounge. The structural framework is reinforced concrete, the ultimate in fireproof construction. It is, therefore, unusual that the construction cost (without furnishings) was only \$10.11 per square foot of floor area, an equivalent to a cost of \$2270 per student for the building proper.

Exterior view of men's residence hall at Illinois College, Jacksonville, Ill.





Refectory and snack bar.

The building includes, in addition to the dormitory facilities, a house mother's apartment with kitchenette, a spacious men's lounge, and a large refectory or so-called snack bar area with its adjoining kitchen. If the cost of the refectory and the food service portion of the building (which actually serve as a Student Center for the entire student body) are deducted from the over-all expenditure, the cost of the residence hall proper, including lounge and house mother's quarters, is \$2040 per student.

Fixed furnishings, including built-in dresser units, built-in desks, wall-hung bookshelves for each student, together with such items as architect's fees, accounted for an additional unit cost of approximately \$1.55 per square foot above the actual building construction cost. These cost figures perhaps have more significance when viewed in the light of the substantial quality of the construction and the adequacy of the individual student accommodations.

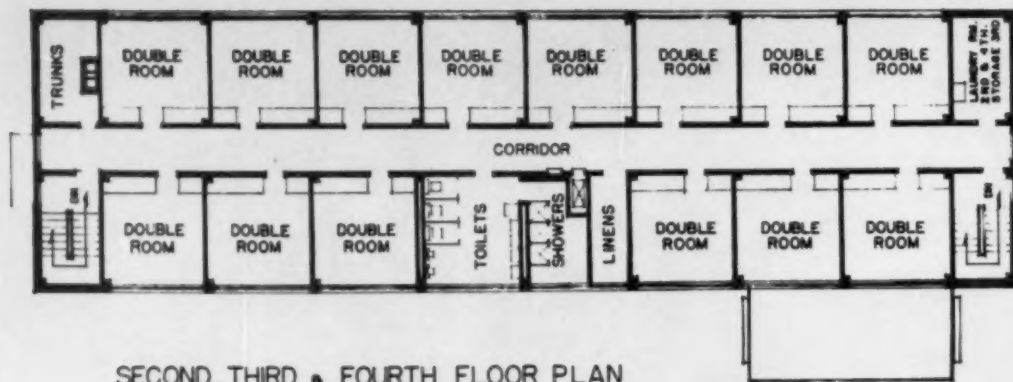
Quarters are provided for 105 students, comprising 52 double rooms and one single room for a senior supervisor. The typical student room is approximately 14 feet square. The building has four stories of dormitory rooms above the street level.

Taking advantage of the sloping site, which permits an additional story below the street level to have windows from floor to ceiling on the south, the architects placed the recreational areas on this lower level. Here is the lounge with its fireplace and expansive view, the refectory area, and a segregated game room for ping-pong and other activities. This recreational floor area is subdivided by folding partitions that can be thrown open to provide a single large area almost 110 feet in length for student parties, dances and other gatherings. Coat rooms, washrooms, the kitchen, and storage and heating equipment rooms complete the lower floor layout.

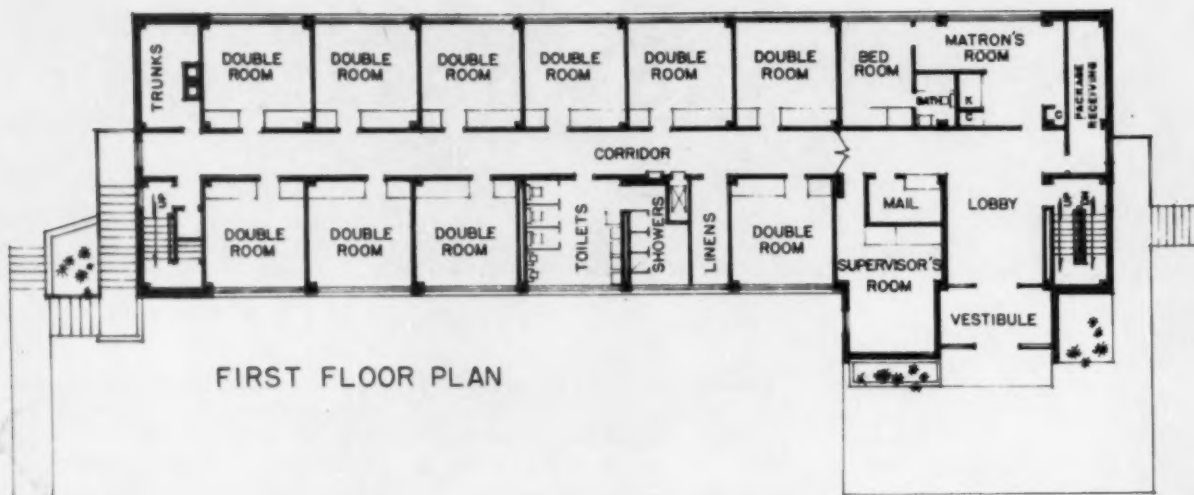
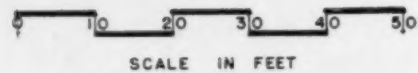
Luggage storage rooms are located on each floor, adjacent to the stairways.

Separate shower rooms and toilet rooms serve each floor. A service entrance has been provided, with a receiving room for students' laundry and dry cleaning, and a large dumb-waiter services linen rooms on each of the upper floors. Laundry rooms on two of the floors have been equipped for installation of washing machines. The building has its own gas-fired water heating system which functions independently in late spring and early fall when the central steam facilities are not in operation. During the remainder of the year, domestic hot water is provided by the central heating system.

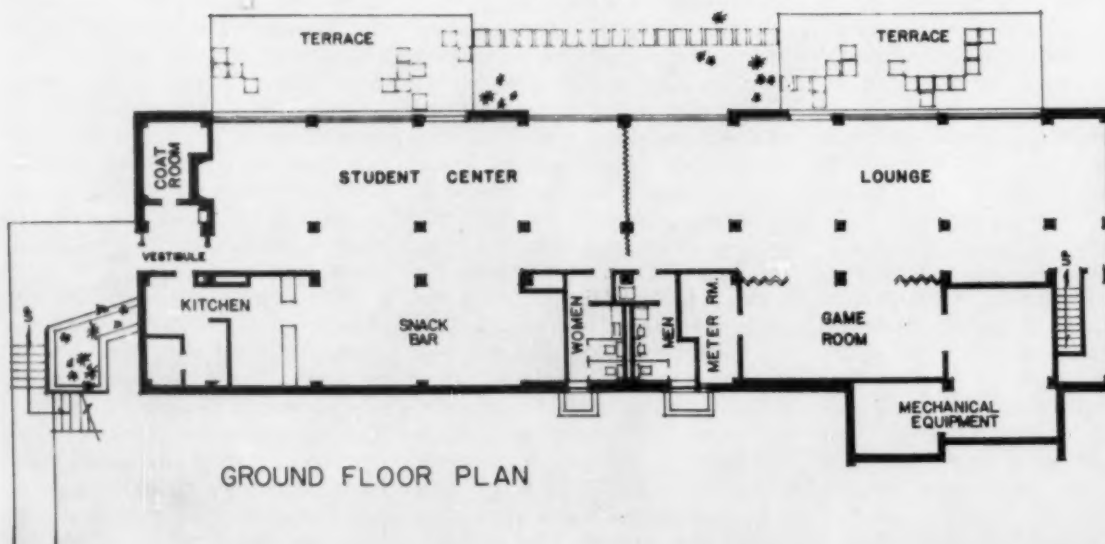
When setting out to establish the basic design, the architects found themselves confronted with three familiar problems: (1) the not unusual limitation of funds; (2) a rigid completion goal for September occupancy, and (3) the frequently encountered problem of reconciling the introduction of a contemporary building (indicated by budgetary considerations, as well as



SECOND, THIRD & FOURTH FLOOR PLAN

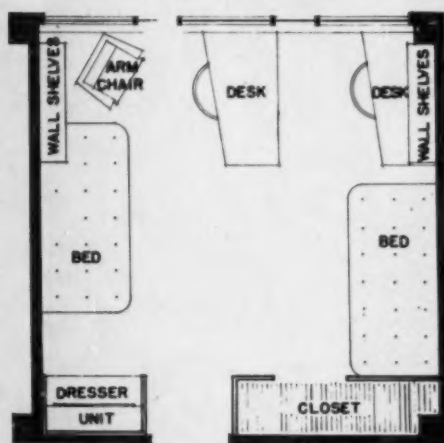


FIRST FLOOR PLAN



GROUND FLOOR PLAN

Right: Section of one of the 52 double rooms in Illinois College's new residence hall. Furniture has been arranged so as to provide a maximum of open area for dressing and living functions. Below: Floor plan of typical double room. COVER PICTURE shows another view of the same room.



Photograph by Hedrich-Blessing

esthetic) into an existing setting of varied architectural styles.

Problems 1 and 2 were solved by careful selection of materials, by thorough organization of the construction procedure during the design stage, and by minutely detailed planning of all of the component functional units. The typical student room and its furniture arrangement were thoroughly studied, and this typical room was integrated carefully into a structural framing pattern of the most economical dimensions, arrived at through many comparative studies. In addition, every structural unit including the very blocks of which partitions were built and the dimensions from wall to wall, from column to column, and from floor to floor were carefully given comparative study to eliminate unnecessary cutting of units or waste of material or labor.

The heating system and the plumbing and electrical layout were likewise methodically analyzed to ensure elimination of wasteful routing or unnecessary fitting. Unusually careful integration of these mechanical elements into the structure was necessary to avoid exposed plumbing and heating mains and risers, and piping, which ordinarily are difficult to conceal economically and adequately in a structural system

employing block construction for partitions and solid concrete slab construction for floors and ceilings.

To produce a satisfactory solution to Problem 3, the designers sought to attain a simplicity of line and mass. This simplicity, the repetitive use of the necessary functional elements, and the avoidance of unnecessary elaboration, coupled with careful selection of the color and texture of materials, give the building a serenity and repose.

The fixed-in-place furniture in student rooms has been arranged so as to provide a maximum of open area for dressing and living functions. The arrangement of windows and furnishings enhances the feeling of breadth of the room. Each student has a desk at right angles to the window, which provides daylight from the left side as well as a broad view of the campus greensward. Draw draperies curtain the continuous window, which has its sill just above desk height. Single beds of the studio type, arranged for boxsprads, are placed at opposite sides of the room. These serve as additional seating during the day.

A double dresser unit and a double closet are arranged along the corridor wall of the bedrooms. These units, together with the entrance door, are finished in natural red birch, providing

a complete wood paneled wall effect that gives a pleasing contrast to the masonry textured side walls. This placement of closet and built-in dressers tends to screen out corridor noises. Partition materials also were studied carefully for the minimum of sound transmission, and acoustical tile was provided on the corridor ceilings.

Each dresser unit has two tiers of drawers and a sliding mirror arranged to give access to storage space behind it, and there is an additional storage compartment above. Wall-hung bookshelves at each side of the room not only save floor space but add a decorative accent.

The designers felt it was important to avoid monotony in decoration and at the same time to provide wall surfaces that would not show soil. Therefore, deep colors (of oil-base paint for ease of washing or recoating) have been used freely. Alternate color schemes for rooms help create a home-like atmosphere. Continuous tack strips afford students a means of hanging pictures and wall decorations without wall surfaces being marred.

All rooms face either north or south to eliminate the unpleasant, penetrating daylight from low east or west sun. This orientation lends itself well to a simple and uniform system of heat



Ground floor lounge opens onto terrace.

control, which employs two circuits for the two distinct temperature zones.

All materials used in the building, and the basic construction, were selected for permanence. The supporting framework of columns, girders and slabs is of reinforced concrete, and the red Colonial face brick conforms with most of the older buildings. Exterior walls are of so-called cavity construction, which provides an insulating air space, as well as an exceptionally dry wall. The structural floor system is a concrete reinforced slab design, providing a flat uninterrupted surface and eliminating the necessity for a plastered ceiling. Plastic coated plywood forms were used for ceiling construction to provide smooth surfaces.

Lightweight insulating concrete blocks form the interior partitions of student rooms. They give a certain amount of acoustical correction and provide an attractive wall texture, and the need for plaster was eliminated.

Stairways are of reinforced concrete with metal railings. Above the first

story the floors in individual rooms are surfaced with rubber tile for quietness and comfort. In the corridors a resilient, tough and long wearing sheet type of floor covering ensures durability and quiet. Fire doors are metal but all other doors, including those to student rooms, are solid-core birch, of flush design, with integral metal frame and trim. Windows are steel casement, crank operated, with bronze screens.

The baseboard perimeter heating system, with its simple piping system, gives highly satisfactory and uniform heating at low installation cost. A series of baseboard convectors encircles the exterior of each floor, split into one zone for north exposure and one for the south, measuring out for each a calculated proportion of hot water heat. This continuous coverage of the exterior wall beneath the windows blankets the cold of the wall surface and the glass and stops objectionable drafts. A separate outdoor thermostat for each of the two principal zones sets the water temperature according to weather

conditions affecting that particular exposure. A moderate amount of individual room control also is made possible for the occupants by means of dampers installed in the convectors.

For the primary source of heat, steam from a central heating plant is converted to hot water in a heat exchanger located on the ground floor in the equipment room of the dormitory.

Careful consideration was given throughout the design to ensure ease and low cost of maintenance. For example, aluminum copings and aluminum sills in 14 foot continuous lengths have only a small fraction of the usual number of joints to require periodic calking. The lightly stained finish on the woodwork and paneling and the deep colors on walls give a rich and cheerful effect and at the same time reduce the need for frequent washing or decorating. The corridor floor covering is available in single piece roll or full width, and has a minimum of cemented joints. Long wearing and quiet, it is easy to maintain.

# Technics of the Management Survey



## Part 5 of a series by IRVING SALOMON

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AS OF THIS WRITING, THERE HAVE been about 50 administrative surveys by professional management engineers in institutions of higher learning. This includes both privately and publicly controlled universities and colleges.

An analysis of the reports of those surveys which have been made available has yielded revealing information. First, it is noteworthy that every survey reviewed included sufficient recommendation for improvement which, if executed, would justify the financial outlay. Second, the inherent difference in the operation of every college or university precludes any uniformity in the findings which would provide some consensus to serve as guidance for other educational institutions. Even where the problems are almost identical, they have been approached in a different manner, sometimes by the same consulting firm, resulting in completely different recommendations.

### REPORTS COMPREHENSIVE

While the earlier reports generally reflect the experimental nature of a scholastic management survey, technics have been developed in recent years that have transformed most of the surveys from experimental projects into realistic and meaningful devices that have accomplished their major objectives. The reports as a whole have been comprehensive and have effectively pointed out better business practices and more efficient operations. With the advantageous perspective as detached observers, some management consultants have discovered major deficiencies not readily apparent to institutional officers and have contributed practical suggestions for remedying them. Officials of colleges and universities that have had surveys generally express the opinion that most of the criticisms made by professional surveyors proved to be valid, and that sheer corrective measures when in-

stalled improved functioning and produced many economies.

To be more specific, following are data taken from the reports of seven more or less typical surveys, four colleges and three universities:

The report of the survey of college No. 1 contains 45 recommendations for improvement, four of which represented monetary economies.

The report on college No. 2 contains 43 recommendations for improvement, three of which were likely to result in the reduction of expenditures.

The report on college No. 3 contains 50 recommendations for improvement, 16 of which are in the nature of financial savings.

The report on No. 4, a university, contains 55 recommendations for improvement, of which three resulted in financial savings.

The report on No. 5, a university, contains 74 recommendations for improvement, six of which should definitely be budgetary economies.

The report on No. 6, a university, contains 74 recommendations for improvement, of which 30 could conceivably result in some monetary economies. This is a very recent survey employing some of the latest technics. It will be interesting to learn what problems will be encountered in the installation of the recommendations, and if the expected economies of more than \$250,000 annually are likely to materialize.

Although the report on college No. 7 contains suggestions for lowering costs, the board was less interested in these economies than in the comprehensive program developed by the consultants for which they could enthusiastically obtain financial support.

The same areas were not studied in each of the seven institutions, nor were the emphasis and penetration similar, because they were adjusted to

the particular requirements of each. These were all so-called "general surveys," yet none encompassed more than 75 per cent of the total areas amenable to study; most involved less than 60 per cent. Yet there was a grand total of 112 categories or functions studied in the seven institutions.

### COMMON AREAS

The only common areas that were examined in all seven institutions were the following:

Library facilities, in which two could be reorganized to produce economies.

Library services, where again two of the seven could produce some savings.

The admissions organization, in which one out of seven was capable of producing savings.

Personnel administration, including both faculty and nonacademic.

Food service organization and physical facilities, of which four could produce savings without lowering standards.

Budget formulation and execution, and accounting procedures, two of which contained recommendations that might produce economies.

The following are some of the potential economies that appear in these seven surveys reports:

Combining accounting activities into one office, eliminating three typists and one messenger: annual savings, \$8700.

Reorganization of the university news bureau and combining two publications: annual savings, \$27,000.

Consolidating athletic departments and eliminating one administrator and two clerks: annual savings, \$12,000.

Reducing staff and purchase of library books through bookstore at 40 per cent discount instead of 33½ per cent: annual savings, \$9850.

Establishing work standards for

maintenance, thus reducing maintenance force: annual savings, \$82,000.

Eliminating veterans' contact office and transfer function to controller's office: annual savings, \$10,500.

Combining the dispersing of student loans and collection activities into one group, eliminating two clerks: annual savings, \$4000.

Reorganizing of student placement service: annual savings, \$8900.

Reorganizing of admissions office, including simplification of records and reducing force: annual savings, \$13,300.

Application of tabulating machine technics to records and forms, including combining and redesigning some of the forms: annual savings, \$12,500.

Transferring of food preparation from infirmary to main kitchen: annual savings, \$5000.

Discontinuing paid message service, replacing with students: annual savings, \$5000.

Discontinuing separate housekeeping crews for each residence hall and integrating into one unit: annual savings, \$30,000.

Closing inefficient dining hall and shifting load to another dining hall: annual savings, \$21,000.

Reducing drafting and clerical force of buildings and grounds department: annual savings, \$7000.

Transferring power plant maintenance function to repairs section, permitting reduction of force by three persons: annual savings, \$12,000.

Converting half of present printing volume to offset: annual savings, \$22,000.

Publishing bulletins on two-year cycle: annual savings, \$13,000.

Installing automatic telephone equipment to eliminate five telephone operators: annual savings, \$12,300.

Raising the standards of approval of books to be subsidized: annual savings, \$12,000.

There have been disappointments in some professional surveys, largely because certain areas had been omitted, or because the study had been cursory instead of penetrating. The fault often is due to a lack of understanding between the principals concerning the scope of the survey, and the penetration and technic to be employed. Perhaps this can be blamed on the lack of experience by the college head involved and/or that the management firm had been remiss in supplying sufficient details in its proposal.

As there is a significant lesson in

these disappointments, some of them are recounted here.

A midwestern college with buildings and grounds far in excess of its shrunken enrollment requirements omitted an analysis of its physical plant maintenance cost, probably because it might be considered an indictment of its use of available funds. As this expense item was second only to that of instruction, a serious error was made since the greatest economies could have been reaped by a study of its maintenance problems.

Another midwestern institution had two major department heads who resented the management survey and were quite uncooperative. It was apparent that neither the consultants nor the executives of the institution arranged to indoctrinate these individuals properly. Furthermore, when the recommendations were offered, no effort was made to gather their thoughts concerning the recommendations that affected them. This psychological failure has prevented an improvement in two departments where potential dollar savings could have been expected.

#### **RECOMMENDS HIGHER EXPENDITURES**

The president of one college voiced disappointment over the report not only because it contained few budgetary economies but, because on the contrary, it recommended certain higher expenditures. This report counseled that the staff be increased in order to achieve the educational goals of the institution and to permit reallocation of the work load and responsibilities, which were overtaxing the two top officials. Apparently, the president believed that the primary purpose of a management survey was to produce economies and conveyed this impression to his board. Hence, the report was somewhat embarrassing because it recommended a greater outlay of funds.

Almost the reverse to this is the case of one university president who complained that the report overemphasized potential dollar savings. The \$100,000 annual savings itemized in the report, he felt, was quite unrealistic and failed to recognize certain circumstances prevalent in the institution that made some of the recommendations not desirable to inaugurate. Because he obtained only \$60,000 of the savings itemized in the report, he was called upon to justify to a few adamantly economy-minded trustees

his omission of certain recommendations which they seemed to favor.

The officials of another institution voiced the opinion that many of the recommendations made by the management consultants were either not specific enough or too difficult to install. Some colleges find it advantageous to make their own installations of recommendations but this institution, lacking sufficiently experienced personnel, insisted that the consultants should have installed their recommendations, though this was not part of the original understanding.

Some dissatisfaction with the operations of one firm of management consultants was expressed by one college president because the representative of the firm chose to work more closely with the chairman of the board of trustees and to develop data that were particularly interesting to the board (promotion and fund raising) rather than an objective appraisal of the organization, functioning and requirements of the college.

While there have been a few evidences of dissatisfaction with professional management surveys, as just discussed, approximately 25 college and university officials, even including most of the aforementioned complainants, have expressed themselves more or less enthusiastically that they are convinced a management survey is a worth-while instrumentality. There is general agreement that they have gained the following benefits:

1. Clarification of the functions, responsibilities and procedures that will assist in achieving the institution's goals.

2. A broad orientation in the business approach to administrative operations, not only for the president but for many of the other executives.

3. Confirmation of suspicions of inefficiencies in certain departments.

4. Sound recommendations for budgetary economies that can produce a larger savings within a year after installation than the cost of the survey.

While the foregoing pertains to management surveys conducted by professional consultants, substantially the same benefits should result from self-surveys. It is believed that the time has arrived when the scholastic management survey can be recognized as an essential device by which any university or college can improve its business operations and stretch its academic dollars.

## Continuing a series on finance

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# Analysis of Expenditures for Administrative and General Purposes

IN THE FIRST TWO OF THIS SERIES OF articles on analysis of expenditures of educational institutions, we reviewed briefly two methods of expenditure analysis that have been developed, with stress on the need for normative data. This third article deals with some methods of analyzing and interpreting expenditures for administration and other general purposes. Subsequent articles will be concerned with other functions, such as libraries, instruction and plant operation and maintenance. Expenditure data collected since 1952 for six New Mexico institutions will be used for illustrative purposes.

The variations shown in Table 6 call for some explanation and justification. The figures for institution "E" in particular suggest that it could well afford to reduce its administrative expenditures and devote more of its funds to the instructional program. These data were the basis of action by the Board of Educational Finance in making a substantial reduction in the 1955-56 budget of this institution for administration and general expense.

The data show that the larger institutions tend to spend less per student for the administration and general function than the smaller ones spend. Both the figures for percentage of total educational expenditures used for administration and general and the amount per student expended for this function point to what has been known to students of higher education

**Table 6—Expenditures per Student for Selected Administrative Services in Six State Institutions of Higher Education for 1954-55.**

Institution	Enrollment	Registrar's Office	Information, Public Relations, & Administrative Publications	Business Office*
"A"	3,727	\$16.22	\$3.33	\$24.42
"B"	1,702	17.40	9.24	32.51
"C"	925	15.48	18.81	16.22
"D"	464	20.03	15.76	31.80
"E"	967	13.41	17.92	20.57
"F"	174	53.12	71.82	183.11
Weighted Average		\$17.42	\$10.39	\$28.63

\*Before proration of overhead to non-instructional units.

for some time, namely, that institutions with enrollments of approximately a thousand or less are in many respects inherently less efficient than institutions with larger enrollments. Certain administrative functions, such as meetings of the governing board and the office of the president, have to be performed regardless of the size of the institution, and their expenditures do not correspond in scope to the number of students enrolled.

The experience in New Mexico has been that, once this fact is explained to legislators and to state finance officers, they no longer get greatly excited over variations in data showing expenditures per student for educational and

general purposes. They tend, rather, to show greater interest in promoting enrollment increases in the smaller institutions, hoping that registrations may reach a point where more economical operation can be expected. When the analysis indicates that factors other than enrollment, such as top-heavy administration, are the probable causes of high unit costs, officials of the institutions need to be urged to take steps to correct the situation as quickly as possible.

The kind of analysis data that have been dealt with so far in this discussion give but a bird's-eye view of administration and general expense. While for the institution's public the data can serve a useful purpose, for its officials they should lead to further inquiries. What percentage of the total expenditures for administrative and general purposes is devoted to each of the major activities that comprise this category? Is the increase in expenditures per student for administration and general purposes over the past several years due to staff additions in the business office and the registrar's office, or is it due primarily to expansions in student welfare services? These and similar questions can be answered only by a detailed analysis of well defined subdivisions of expenditures for administration and general purposes.

The National Committee on Standard Reports for Institutions of Higher

Education, in its 1935 report, recommended that administration and general expense be classified into two subdivisions: (1) "general administrative offices," which would include all expenditures incurred by the governing body, the offices of the president, business manager, registrar, and dean of students, and by other offices concerned with the administration of the institution as a whole, but excluding those incurred by the library and plant operation and maintenance; (2) "general expense," which includes expenditures for a host of services such as information, student employment, health service, commencement, diplomas and auditing. This second subdivision is a veritable catch-all. Most of these items, with a little intelligence and ingenuity, might well be classified under other major categories or in one or more new subcategories that should be invented.

The National Committee on the Preparation of a Manual on College and University Business Administration, in its 1952 volume, retained the category of "General Expense," but separated it completely from administration as a category parallel to "libraries," "instruction," "organized research," and so forth. It also suggested that "General Expense" be classified into three subdivisions: "student welfare," "staff benefits," and "general institutional expense." The retention of the "general institutional expense" category is only a concession to the accountant who is too lazy or too stupid to classify the items under some more meaningful rubric. Because this category has long been considered standard, however, it is retained in the New Mexico financial accounting system.

The separation of expenditures for student services from other administration and general expense was certainly appropriate and well timed, for such services are expanding in some institutions to the point where they almost equal expenditures for general administration. The establishment of "staff benefits" as a separate subdivision would be most meaningful in institutions where expenditures for retirement payments and health insurance for all units are classified as a part of administration and general expense.

The New Mexico institutions, however, budget expenditures for staff benefits (except group insurance, an inconsistency that has previously been

explained) to the offices and departments to which the employees belong, and not as a lump sum under administration and general expense. This is an alternate method suggested by both the national committees on standard financial reports.

New Mexico institutions, by agreement among the business managers, classify their administration and general expense into three subdivisions: "administration," "student welfare services," and "general expense." With but minor exceptions the items included in each of the subdivisions are identical with those suggested for "general administration," "student welfare," and "general institutional expense" in the 1952 committee report.

Table 4 shows the percentages of total educational and general expenditures for "administration," for "student welfare," and for "general expense," and the amounts per student for each function for 1954-55 at each of six New Mexico institutions. These data point up certain interesting variations

amination of their budgets should be made. Institutions "B" and "C," it was found, classify their student health services as an auxiliary enterprise and did not include them in their reports on expenditures for student welfare services. This is an inconsistency that should be corrected. The other four institutions, including "A," classified their student health services as a part of their student welfare program. This difference in accounting practice explains in large part the unusually low expenditure per student for student welfare services at institutions "B" and "C."

The data shown in Table 4 suggest that at institution "E," which earlier had been referred to as an institution with an overly elaborate administrative organization, the areas that are out of line are its administrative offices and its student welfare services. Its "general expense" is at a reasonable level.

The items included under each subdivision of administration and general

**Table 4—Percentage of Total Educational and General Expenditures for Administration, Student Welfare, and General Expense, and Amount per Student for Each Subdivision for 1954-55 for Six State Institutions of Higher Education.**

Institution	ADMINISTRATION		STUDENT WELFARE		GENERAL EXPENSE	
	Percentage	Amount per Student	Percentage	Amount per Student	Percentage	Amount per Student
"A"	6.7	\$50.77	5.2	\$39.29	2.7	\$19.95
"B"	10.4	72.00	2.7	18.34	1.5	10.36
"C"	10.2	71.21	1.6	10.87	2.2	15.52
"D"	12.2	109.02	5.8	51.57	3.8	34.41
"E"	12.6	77.25	7.2	44.27	2.4	14.76
"F"	11.5	193.34	2.2	36.91	2.2	38.28
Weighted Average	9.1	\$67.41	4.4	\$32.77	2.4	\$18.00

among institutions that the percentage figures on distribution of expenditures for educational and general purposes did not bring out. Each of institutions "A," "B" and "C" expends approximately 15 per cent of its total educational and general expenditures for administration and general purposes. But institution "A" assigns 6.7 per cent to "administration" and 5.2 per cent to "student welfare." Institutions "B" and "C" each devote approximately 10 per cent of their total educational and general expenditures for "administration" and less than 3 per cent for "student welfare."

Before any conclusions are reached about adequacy and relative efficiency of student welfare services among these three institutions, further ex-

penditure are subject to much more detailed kinds of analyses. The data produced from such analyses can be of great value to institutional officials. For the New Mexico institutions the Board of Educational Finance regularly provides comparative data on salaries for individual administrative positions. Data also are provided on expenditures for a number of administrative and general services, such as public relations and information, administrative publications, auditing and so forth.

Table 5 shows the sort of data regularly provided on the salaries paid administrative officers, and Table 6, the amounts expended per student for selected administrative services for 1954-55. Table 7 shows the kind of

analysis that can be made of budgetary data pertaining to secretarial and clerical personnel in the administrative offices of the six New Mexico state institutions of higher education.

There has been virtually no research reported on the standards for the number of secretaries and clerical workers a college or a university should employ. Table 7 shows that the number of such personnel differs greatly from one institution to another. But the ratios of students to each person on the clerical staff suggest an interesting relationship between number of clerical employees and enrollment. Institutions "A," "B," "C" and "E," each of which has enrollments of approximately a thousand students or more, have considerably higher ratios of students to clerical personnel than have the two smaller institutions. Institutions "A," "B," "C" and "E" have made no attempts to exchange information on the number of clerical personnel that might be justifiably employed, but the ratios of number of students to each person on the clerical staff for these four institutions have a high degree of similarity.

The New Mexico data suggest that reliable norms might be developed on student-clerical employee ratios for institutions of different sizes. Such information would greatly assist administrative officials of higher educational institutions in detecting inefficiencies in an area to which a large proportion of total expenditures for administrative and general functions is committed. On the average, the six New Mexico institutions during 1954-55 devoted to salaries of secretarial and clerical personnel employed in the

**Table 7—Analysis of Budgetary Information Pertaining to Number and Salaries of Secretarial and Clerical Personnel in Administrative Offices of Six State Institutions, 1954-55.**

Item	INSTITUTION						Weighted Average
	A	B	C	D	E	F	
Number of full-time clerical personnel in administrative offices	57.5	21.0	7.0	11.1	13.0	6.5	—
Total salary paid clerical personnel in administrative offices	\$163,640	\$56,600	\$14,804	\$29,338	\$29,800	\$18,900	—
Average salary paid clerical personnel in administrative offices	\$2,846	\$2,695	\$2,115	\$2,643	\$2,292	\$2,908	\$2,697
Percentage that salary payments to clerical personnel are of total educational & general expenditures	5.8	4.9	2.3	6.5	5.0	6.5	5.3
Number of full-time-equivalent students for each person on clerical staff	61.8	74.5	83.3	33.7	69.2	25.4	68.6

administrative offices more than 5 per cent of their total expenditures for educational and general purposes. At institutions "A" and "B" salaries for the clerical staff took up more than a third of the total administrative and general expenditures.

The average salaries paid the clerical worker in the administrative offices are greatly influenced by the supply and demand for such talent in the area in which an institution is located. Institutions located in the vicinity of

federal installations, such as air force bases and weapons research centers, find themselves having to compete with federal government wage scales in order to retain their clerical personnel. The average clerical salaries at these institutions are several hundred dollars higher than similar averages for institutions located in agricultural, non-industrial areas. The geographical location of an institution of higher education is therefore a factor to be considered in explaining variations in expenditure data for administrative and general purposes.

The kinds of analysis of expenditures for administrative and general functions here presented are by no means exhaustive. They represent but a few that have been helpful to the New Mexico Board of Educational Finance in equalizing the support of the state colleges and universities and in detecting areas of inefficient operation. Published reports from other institutions that regularly make these and other more imaginative kinds of analysis could be of great assistance to college and university administrators, hard pressed to stretch their budget dollars to meet the demands of increasing enrollments and improved quality of service.

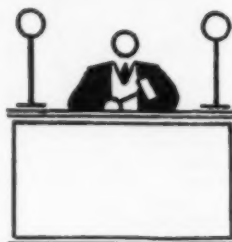
(To Be Continued Next Month)

**Table 5—Salaries of Certain Administrative Officers in Six State Institutions of Higher Education.**

Institution	Year	President	Business Manager	Registrar	Director of Public Relations	Dean of Students
"A"	1954-55	\$14,500	\$7,800	\$7,000	\$6,280	\$9,200
	1955-56	19,000	9,000	7,300	6,630	9,600
"B"	1954-55	12,000	7,932	6,792	6,792*	7,476
	1955-56	18,000	9,000	7,476	7,476*	7,476
"C"	1954-55	12,000	7,000	5,400	6,400	—
	1955-56	14,334	7,832	5,400	6,633	—
"D"	1954-55	10,000	5,200	5,880	5,200*	7,200*
	1955-56	12,000	6,200	6,403	4,917*	7,600*
"E"	1954-55	12,800	8,500	5,900	7,100*	8,900*
	1955-56	13,000	10,000	7,000	9,000*	11,000*
"F"	1954-55	14,000	8,778	6,843*	5,096	—
	1955-56	14,700	9,200	7,300*	5,350	—

\* Annual rate for an officer who devotes less than full time to administrative duties.

# The Charter Powers of a College



**T. E. BLACKWELL**

*Vice Chancellor and Treasurer, Washington University, St. Louis*

A CORPORATION IS, IN THEORY, A legal person or entity created by an act of incorporation with many of the usual legal rights and duties of a natural person, including the right to make contracts, sue and be sued in its own name and not that of its incorporators. However, unlike a natural person, a corporation has only those rights granted in its charter, either expressly or by implication. If a corporation should attempt to exercise rights not granted to it by the state of its incorporation, the attorney general of that state may bring an action, usually termed a quo warranto proceeding, to question the validity of its action. If the court should find that the corporation has exceeded its charter powers, it may penalize the ultra vires act by the imposition of a fine or by the cancellation of the corporate charter.

Does a university have the right, under its charter, to conduct organized courses of instruction outside the state of its incorporation? This question was answered in the affirmative by a recent decision<sup>1</sup> of the circuit court of the county of St. Louis, state of Missouri.

In 1923 the governing board of Washington University established the Robert S. Brookings Institute of Economics and Government as one of its graduate schools, with the first year of instruction given on the St. Louis campus and the last two years in Washington, D.C. In 1924 its name was changed to the Robert S. Brookings Graduate School of Economics and Government.

<sup>1</sup>Washington University v. Dalton. In Equity No. 209617 (1955).

Shortly after classes were organized for work in Washington, a member of the faculty of the school of law of the university submitted an opinion in which he held that there was serious question as to the right of the institution, under its charter powers, to conduct an educational program outside the state of Missouri. Since the charter of Washington University is an unusually valuable one, granting complete exemption in perpetuity from all state and local property taxes, its governing board decided not to run the risk of having it canceled by a quo warranto proceeding. Steps were taken at once to obtain a separate charter for the Robert S. Brookings Graduate School and to sever its relationship with Washington University. In 1927, three institutions, *i.e.* the Institute for Government Research, the Institute for Economics, and the Robert Brookings Graduate School, were merged to form the Brookings Institution, located at the nation's capital and dedicated to public service in the social sciences.

## REQUEST EMPLOYE TRAINING

During the past few years Washington University has received a number of requests from industrial concerns in East St. Louis and other Illinois communities within the metropolitan area of Greater St. Louis urging the establishment of organized courses of instruction for their employes to be given in their own plants. The urgent necessity to upgrade employes to meet the demands of an advancing technology is, of course, the motivation for such requests.

Before responding to these requests, the governing board of Washington University decided to seek a declaratory judgment from a court of equity to determine its charter powers in this respect. The attorney general of the state agreed to cooperate and to take the steps necessary to place the issue before a court of competent jurisdiction.

In his statement to the court, the attorney general, as defendant, took the position that Washington University had no right to conduct courses of study outside the state of Missouri. He asserted that should the university "attempt to exercise its charter in such manner he will cause proceedings to be instituted for the forfeiture of its corporate franchise and privileges.

... The defendant thinks it quite plain that the legislature in granting the extraordinary privilege of complete exemption from taxation expected and intended, in return, that the plaintiff's performance of its functions should be for the benefit of the residents of the state of Missouri. ... Therefore, the defendant submits that the plaintiff's charter must be construed as if it contained an express limitation to such effect."

He cited an early New York case<sup>2</sup> in support of his position. In 1830 Geneva College, located in a small village, found it necessary to move its school of medicine to New York City in order to obtain a sufficient number of clinical patients for its students. The attorney general of the state of New York filed suit, charging that the trustees of the college were usurping powers not granted by its charter. In his opinion in this case, Chief Justice Savage stated:

"Corporations take nothing by implication. Certain powers are indeed incidental to the principal business to be carried on, but instruction at Geneva by no means requires or justifies the establishment of a branch in the City of New York."

The attorney general of Missouri also relied upon a case decided almost 60 years ago by the supreme court of Colorado.<sup>3</sup> In 1892, the regents of the University of Colorado established a school of medicine on its campus at Boulder. Owing to the lack of clinical material in the small community at Boulder, the regents de-

<sup>2</sup>People v. Trustees of Geneva College, 5 Wendell (N.Y.) 21, (1830).

<sup>3</sup>People v. Regents of the University of Colorado, 49 P. 288 (1897).

cided to conduct the last two years of medical instruction in Denver. In an action brought in the name of the people of Colorado, the court ordered the regents to discontinue work at Denver. The decision of the court was based upon the following logic:

"If the regents have the power to remove a part of any of the departments of the university, it follows that they have the power to remove an entire department. If they have the power to remove an entire department, they have the power to remove all or such departments as they may determine. To say that they have any such power would be equivalent to declaring that they may move the entire university from Boulder and thus override the constitution itself and render nugatory the efforts of those by whom the location was secured."

Counsel for Washington University directed the attention of the court to a more recent decision, decided in 1925 by the supreme court of Pennsylvania.<sup>4</sup> The Meadville Theological School was incorporated in 1846. Because of its location, far removed from any modern university, its trustees found it increasingly difficult to attract suitable candidates for the Unitarian ministry. After a survey, the trustees decided to purchase property adjacent to the campus of the University of Chicago and conduct summer sessions there each year. Later, plans were made to obtain a charter from the state of Illinois and transfer the assets of the Pennsylvania corporation to the new corporation. A minority of the governing board objected and brought an action to restrain the transfer of assets. The court, although deciding that the assets should not be transferred, declared:

"There being nothing in the laws of this state or those of Illinois to prevent carrying the objects of the school fully into effect by educating the students in Illinois, they have the right, in the exercise of a sound discretion, so to do."

The following quotation from a Kentucky decision<sup>5</sup> was cited for the information of the court:

"A college means, or ought to mean, growth; the elimination of the false; the fostering of the true. As it is expected to be perpetual in its service, it must conform to the changing con-

ditions of each new generation, possessing an elasticity of scope and work commensurate with the changing requirements of the times which it serves. For the past to bind it to unchangeless would be to prevent growth, applying the treatment to the head that the Chinese do to the feet."

On the basis of this appeal for a modern, progressive approach to the problems of higher education, the circuit court of the county of St. Louis, in a decision<sup>1</sup> dated Sept. 14, 1955, held:

"1. That the Washington University, plaintiff herein, has authority under its special charter and is authorized to enter into contracts or to other-

wise arrange for and to establish and conduct courses of study and educational programs and to participate or engage in other educational activities in the locations outside the state of Missouri.

"2. That the plaintiff may issue and grant to students participating in such courses and programs certificates or other evidence of credit therefor, when such credit is earned, in the same manner and with the same effect that the same are issued and granted to students regularly enrolled in plaintiff's courses and programs now conducted in its colleges, schools and departments in the county and city of St. Louis, Missouri."

#### A step-by-step program:

## Preserve That Equipment

**LeROSS MORRIS**

Director of Physical Plant  
Denison University, Granville, Ohio

PREVENTIVE MAINTENANCE SHOULD start immediately after the contractor turns over a new building to the buildings and grounds department. It is utterly false to think that a new building or a new piece of equipment, because of its newness, will function for some time without any maintenance. True, because of its newness, it should function well, but there may be a failure resulting from a faulty adjustment, a defective casting, insufficient lubrication, or one of many other reasons. Maintenance starts the first day the equipment starts operating.

The most important thing in preventive maintenance is its operation—how it is planned, carried out, and controlled. What assurance do you have that your program is being followed? How extensive is the program? Do you regularly check only the mo-

tors in your plant, or do you cover all mechanical equipment, such as pumps, compressors, unit heaters, traps and valves? Do you also include buildings and cover such items as roofs, parapet walls, skylights, drains, building hardware, floor sealing, and furniture refinishing?

There is, of course, a limit to how far you should go. There must be a correlation between the extent of a preventive maintenance program and the over-all value of the items covered. Many items, because of their smallness, need not be included in a major program. I do not mean that small items such as window shade pulls and door-knob screws should be disregarded; such items should be handled by the daily custodial crew as part of their routine work. But the major pieces of equipment must not fail because of improper care or lack of repair. It is not at all uncommon that, because of lack of grease, a bearing is worn, and because of the worn bearing the

<sup>4</sup>Hemstead v. Meadville Theological School, 130 A. 421 (1925).

<sup>5</sup>Central University of Kentucky v. Walteis, 90 S.W. 1066 (1906).

From a paper presented at the annual meeting of the National Association of Physical Plant Administrators of Universities and Colleges, Laramie, Wyo., 1955.

shaft is scored, both resulting from the original neglect of proper lubrication.

Care must be exercised in setting up a preventive maintenance program. It is possible to make it too elaborate and all-inclusive as well as costly. Some items will be taken care of during the course of daily custodial cleaning. Broken windows, defective locks, broken sash ropes, and the like should be spotted and reported to the office by the custodian (provided he cannot make the repair himself). A good working correlation between instructors and the buildings and grounds department will result in many such minor items of repair being reported to the office. A diplomatic show of appreciation on the physical plant director's part will help to promote a good relationship between the department and the faculty. A quick response in making the repair is a big help.

The first step in instigating a program of preventive maintenance is to decide how extensive the program is to be. List briefly the items that should be included, such as electric motors, return pumps, reducing valves, circulating pumps, expansion joints, unit heaters, ventilating units, compressors and so forth.

The next step is to make an itemized file of each unit, as in the case of electric motors. List the building, location within the building, motor make, size, voltage, phase, serial number, original cost, vendor and all other pertinent information. This file is known as the master file and is a permanent record.

#### **SERVES AS INVENTORY**

Such information is valuable in other ways, as it serves as an inventory of what you have. It also serves as a reference for future purchases and is valuable when corresponding with the manufacturer regarding parts. This information is then set up in a filing system arranged by buildings in such way as to be readily accessible to the office clerk. Several suitable filing systems are available on the market. The main thing is to have the information so filed that it is easily found and checked with work orders. Items are set up for service weekly, monthly, semi-annually or annually, depending on need and availability. A careful analysis must be made to determine into what category an item shall be placed.

After the filing system has been arranged, which will include every unit of equipment or property to be covered, the program then is ready to start. One day a week is set aside by the dispatch clerk as the day for writing up preventive maintenance work orders. On that day, she pulls the cards that are up for service and writes orders to cover them. As they are written, notations are made in the file to the effect that the order has been issued. Work orders from then on are processed through regular channels, and the repair parts needed are charged out from central stores to the job on the work order. It is the storekeeper's responsibility to keep the stock up so that parts are available when repairs are needed.

At Denison we find it an advantage to have a mechanic service all pieces of equipment when he is at a building instead of checking only certain items, such as motors or pumps. In other words, he will check the unit heaters and condensate pumps; he will inspect for leaky flanges, valve stems, and the like, all on the same trip. We do not necessarily list every valve or flange that is in use, but it is part of the workman's job to check them as part of his inspection program. Also, we try always to send the same men to make the inspection in a given building. They become familiar with the location as well as the characteristics of the equipment.

The repair record, which is the completed work order, is helpful in determining what parts should be kept in stock. Past experience, of course, is the best guide; however, the stockroom clerk must be made aware of what parts are usually needed. Care should be exercised to see that not only the repair parts are on hand but that excessive stock is not carried. Some systems carry a spare parts card, and others note the main spare parts needed on the permanent record card. In either case, the bin number is noted, and this serves in locating the part easily. The card also is a help in re-ordering. I should like to emphasize the importance of operating a careful stockroom. Much money can be tied up in overstocking.

Some buildings and grounds departments have a work order card that is used by the mechanics instead of the ordinary office work order. The file containing such cards is similar to the master file except that detailed information is omitted, and there appear on

the cards only the name of the article, location, space to check for lubrication, and the writing-in of the repair parts needed. In some cases even the repair parts are listed so that all the repair man needs to do is to check what was used or done. Such a working card file saves typing of many work orders. The card is made up in such way as to be used for periodical inspection. Of course, the card may come back somewhat manhandled and soiled—one good reason why this file must not be included with the master file.

Another method of preventive maintenance is by outside firms on a contract basis. Such work is the servicing of elevators, typewriters and allied office equipment, boiler water treatment service, organ and piano tuning and servicing, and the like. The number of outside contracts varies with the size of the school. Larger colleges and universities have enough specialized equipment to justify having service men on the staff. This also is true in regard to building maintenance. The large school can have stone masons and bricklayers on the yearly payroll, but the small one must hire them when there is work to be done.

#### **CHECK PLUMBING WEEKLY**

A building does not have to be modern to require preventive maintenance. Most older buildings lack mechanical equipment, but they all have plumbing. It is worth while to schedule a weekly inspection of every plumbing fixture to stop unnecessary waste of water, as well as to correct slow drains and leaky P.O. plugs.

We are likely to connect preventive maintenance only with mechanical equipment. While that is one of the principal aspects, it is equally worth while in connection with nonmechanical items. The checking of expansion joints in our concrete stadiums is a good example. It need not be done more than once a year, but it cannot be forgotten.

Regardless of size of the institution, the fact remains that preventive maintenance is important. The school that disregards it will pay dearly. As economic conditions change, and they no doubt will, the importance of economy will be greater. We hear much about the coming influx of students, and it is not to be denied. It is essential not only that we plan for it by additional facilities but that we try to preserve what we have.

From the standpoint of the food service employee, there are several advantages to being employed by a large food service management firm. For example, he receives better instruction and supervision, and he has more chances for quick promotion.

YOUTHFUL, ACTIVE COLLEGE students and healthy, zestful appetites go hand in hand. The responsibility for assuring that these appetites are properly satisfied rests with the college. Should college authorities, however, undertake the management and detailed day-to-day supervision of such a specialized undertaking as a food service?

This question is the subject of considerable discussion today by college officials who have been observing the rapid growth of professional food service management organizations. These firms, which vary considerably in size and qualifications, specialize in managing and operating the food service in colleges and universities.

There is intense interest in the subject of college managed *versus* professionally managed food service. Muhlenberg College has experienced both.

At present the college has a total enrollment of 725 men students, of whom 325 receive their meals at the Commons, the college dining hall. The remainder of the resident population have fraternity affiliations and receive their meals at their respective fraternity houses whose food services are independently operated. A snack shop adjoining the students' lounge also is available for snacks and refreshments.

Until 1948, we maintained a college operated food service but were finding it increasingly difficult to provide the students with good food at moderate cost without incurring a deficit.

After a partially successful trial with a local restaurant owner and caterer, with rather limited resources, Muhlenberg entered into its present arrangement with a large food service management organization which operates numerous dining halls and cafeterias in colleges and business firms. The results have been very satisfactory,



**A controlled experiment in**

## ***Food Service by Contract***

**HOWARD M. MacGREGOR**

*Treasurer, Muhlenberg College, Allentown, Pa.*

and the food service problems of the college have been solved. Prior to negotiating a contract, the food service management organization conducted a thorough survey of the college and community in order to obtain specific information on which to base a proposal. This contract specifies a fixed yearly charge per student.

In addition to the basic operation of the food service, the management firm makes available to the college a number of supporting services through a central staff. These services include an accounting department that processes invoices and writes payrolls; an equipment consulting department that makes

recommendations on equipment and facility layout; a personnel department that handles personnel requirements, and a purchasing department that controls purchasing procedures. Of equal importance is the staff of field supervisors whose primary function is to make frequent unannounced visits to the food service facilities operated by the firm in order to promote operating efficiency and to discuss current problems with the food service manager.

Although the contractor assumes complete responsibility for operating the dining hall and snack shop at Muhlenberg, the college retains control of the food service policies. Regu-



At Muhlenberg College, 325 of its 725 students receive their meals in the college dining hall, which is managed by a professional food service.

lar discussions with the firm's food service manager at the college provide an opportunity to cover various aspects of the service and make any suggestions that may arise.

Another aspect of this service that has been of value at Muhlenberg is the provision of special food services for various college functions. These include student social events, summer conferences, banquets, faculty meetings, and various community events for which the college's facilities are utilized. Arranging these services is a relatively simple affair that consists of notifying the food service manager of the event, the number expected to attend, and the type of food service desired. He assumes the over-all responsibility at that point without further effort on the part of the college.

In the course of several years' experience with our present method of food service operation we have noted that it offers numerous advantages. For example, there has been a definite savings in the cost of operation. Over the last five years Muhlenberg, in order to meet the general advance in costs, has been forced to increase tuition, fees and room rents; however, the

charges for board have remained unchanged. Under the present system the college has had no risk of loss in the food service because the total yearly cost is known before the academic year begins. It is also comforting to know that these financial advantages have not been obtained at the expense of quality. Although it is difficult to make objective judgments about such subtleties as the taste of food, it is generally agreed at Muhlenberg that the food has improved with the present method of operation.

We attribute the improvements in cost and quality achieved in our food service operation to the sound methods of operation that have been applied, and to the economies resulting from controlled purchasing and proper supervision.

#### RELIEVES BUSINESS OFFICE

An advantage that we have gained with professional food service management is the elimination of detailed day-to-day food service managerial duties by the business office. No longer is the business staff required to direct in detail the activities of the food service staff, pay invoices, keep food service

records, or issue payrolls for food service personnel. All of these functions are handled by the food service manager and central staff of the management firm. Consequently, the time that the business officer and his staff previously devoted to the food service operation is available for other important duties.

The recruitment of competent food service personnel in a college operated food service frequently presents a perplexing problem for the college, especially if it is located in a small community. Were the chef not to put in an appearance one morning, it could easily be a trying day for the harassed official of a college operated food service. However, with a professional food management organization this situation is met easily by provision of a substitute chef from its large staff.

Flexibility of the labor force also makes it considerably easier to serve large groups on special occasions. For example, although our food service staff is normally geared to provide meals for 325 students, it was increased to permit the serving of lunch to 1400 high school students visiting the Lehigh Valley Science Fair the last two years. On another similar occasion, 3300 lunches were served. These extra services are provided by the food service



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firm in conjunction with its basic food service.

So much for the advantages of professional food service management. What are the disadvantages?

To be more specific about the matter of disadvantages, what are some of the points that frequently are discussed pro and con by college officials charged with the responsibility for their food service operations?

There is, for instance, the problem of control. College authorities are naturally reluctant to relinquish control of something so vital to the college program as student meals. However, we have not experienced any difficulty with this problem at Muhlenberg since it is the policy of our food service contractor to place over-all control of the service in the hands of the college authorities. For example, detailed procedures of operation were approved by the college when the service was initially installed. No further changes may be made without the consent of the college. All menus are submitted to the business officer for approval prior to use, and the general status of the operation is discussed with the food service manager at regular intervals.

#### COMMITTEE REVIEWS COMPLAINTS

At Muhlenberg we also have a dining hall committee that reviews suggestions and complaints registered by the student body on the dining service. This committee, which consists of two students from each of the four classes, meets regularly with the college president, dean, business officer, and the contractor's food service manager. We have found that students with suggestions and complaints tend to deal directly with the committee rather than with the dining room manager. Our experience indicates that the students are not inhibited in making their suggestions or complaints known to the committee.

Recently the students expressed a desire for an increased number of choices on the menu beyond those presently offered. Fulfillment of this request would normally result in an increased cost of operation. Our food service organization, however, studied the problem and came up with several possible solutions. The most practical of these was a recommendation that the food operation be modified from waiter table service to cafeteria self-service. This modification permitted a reduction in labor cost that could be

applied to increasing the number of available food choices at each meal.

Initially, this recommended change caused some discussion among administrative officers at Muhlenberg who thought it was socially desirable to have all students eat simultaneously on a formal basis. About 80 per cent of the students, on the other hand, preferred the greater freedom and lee-



way made possible by cafeteria service. Eventually, the administration conceded that greater food variety at each meal was of greater importance than the manner of serving the food. The result: Muhlenberg students now eat cafeteria style.

This situation is described not only to indicate how control of service works in practice but also to illustrate the degree of flexibility possible within the bounds of a contractual relationship.

A pointed objection to the contract food service operation sometimes comes from local businessmen who may view such an arrangement as reducing their sales potential. Such is not necessarily the case. Many of our requirements are supplied from local sources. The college retains the prerogative to decide the relative importance between lower student food costs and local purchases. The decision at Muhlenberg was not to subsidize the local suppliers but to give them equal opportunity to compete for the available business.

Food service employees naturally are apprehensive about any change in management, and colleges are understandably reluctant to part with long-term employees. In our case, it is the policy of the contractor to retain the majority of food service personnel provided they are qualified. Each food service employee at Muhlenberg was given a trial period for evaluation with the final result that more than two-thirds remained in the employment of the contractor. From the standpoint of the food service employee there are

several advantages to being employed by a large food service management firm. For example, he receives better instruction and supervision and has more opportunities for promotion if he has the capacity to advance.

An objection that has been voiced at times against professional food service management in colleges concerns the possible elimination of student labor in the dining hall or cafeteria. This problem is an important one to both the college and to those students who depend on part-time jobs to help finance their education.

Although this procedure may apply to some firms, the food management organization in our college uses student labor to complement its full-time staff. This provides a flexible situation that permits convenient adjustments in the size of the food labor force as required to meet with population variations during vacation periods and holidays. Consequently, this permits the maintenance of a full-time staff of minimum size on a stable basis throughout the school year.

#### EMPLOYEES ADAPT THEMSELVES

A final objection that is sometimes raised proposes that the professional food service operator may not fit into the general atmosphere and pattern of college living. In our situation, the contractor's employees have adapted themselves very well to the pace and attitudes of the college, and the unit has become an integral part of the college community.

In summing up our experience at Muhlenberg on various methods of operating our food service, it might be said that we have conducted a controlled experiment in food management. We have applied three different methods of operation and have evaluated and compared the corresponding results objectively from the standpoint of quality, cost and efficiency. Based on the results, we have concluded that our food service problems have been best solved by engaging a professional food service management organization to manage our entire food operation.

The results generally have been improved quality of food service, increased over-all efficiency of the service, and a reduction in costs. Also, we now have a fixed yearly food service budget prior to the beginning of the academic year and, finally, the business office has been relieved of the detailed responsibility for the food service while retaining complete control of the operation.

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# NEWS

**Begins Experiment in Teaching Technics for Large Classes . . . Expect**

**Enrollment of 700,000 Korean Vets by Year's End . . . Bates Presents**

**Blue Shield Benefits to Staff . . . Calls "Giving" Test of Good Alumnus**

## **Grant Makes Possible Experimental Projects in Instructional Technics**

OXFORD, OHIO. — Miami University has received a grant of \$135,600 from the Fund for the Advancement of Education, President John D. Millett announced recently. The grant will run from Nov. 1, 1955, until June 30, 1957, he said, and will be used to begin four experimental projects in the use of instructional technics designed to enable the faculty to teach larger numbers of students without any loss of educational effectiveness.

"As a state supported university, Miami must be prepared to handle an increasing number of students over the next 15 years," President Millett stated. "More students will demand more faculty members unless Miami and other institutions undergoing expansion can find ways to instruct more students without any sacrifice of educational quality," he explained, adding that the crucial problem has been whether these practices would at the same time dilute the quality of the instructional program.

Four principal practices will be introduced on the Miami campus, Dr. Millett said. The first device will be to increase class size to two or three times the present "normal" number, but without any change in teaching technic, except to use more visual materials. These classes of between 60 and 90 students will be operated alongside "control" groups of 25 or 30 students to determine the relative educational effectiveness of different class sizes.

The second practice will be to retain small sized classes instructed under a senior professor-apprentice arrangement. A senior faculty member will assume responsibility for organizing the instructional program in these courses, but the actual classroom

teaching will be done by junior instructional personnel. The senior professor will meet with the apprentice instructors and will supervise their activity. A strengthening of the Miami University graduate program is expected to accompany this phase of the program.

A third practice will be to introduce large lecture sections meeting twice a week to be followed by small discussion groups or laboratory sections meeting once a week.

Finally, the president said, by means of closed circuit television the university plans to reach large numbers of students in different classrooms with a lecture by a senior faculty member, followed immediately by a discussion group under junior instructional staff. In a 50 minute period, the lecture may consume 30 minutes and the discussion 20 minutes, he said.

All of these instructional practices are being used on various campuses today, Dr. Millett stated. Miami will introduce all four arrangements simultaneously.

## **PARAKEETS AND HAMSTERS? NO!**

BLOOMINGTON, IND.—What are desirable residence hall pets for college students?

"Goldfish and canaries Yes, but parakeets and hamsters No" is the decision of Indiana University dormitory authorities after pondering the matter. Parakeets, heretofore acceptable, must fly out of university housing next semester because when uncaged they are "messy" and also often are left without food and drink when students go home for vacations and week ends. As to hamsters, they are inclined to multiply too rapidly, the committee decided.

## **Fall Enrollments of Korea Veterans Break All Records**

WASHINGTON, D.C. — Fall enrollments of veterans under the Korean G.I. bill have broken all records of the three-year-old training program, Veterans Administration announced November 30.

Incomplete reports from schools show that nearly 615,000 Korea veterans were in training November 1, V.A. said. This represents a 36 per cent increase over the 451,000 enrolled a year ago, and also is well above the previous peak of 603,000 veteran-trainees reached on May 1, 1955.

V.A. predicted that by December 1, when completed fall figures are in, the number training under the Korean G.I. bill might surpass 700,000.

G.I. college enrollments made the largest stride over the past year, V.A. said, rising from 225,000 veteran-students on Nov. 1, 1954, to 341,000 this year—a 50 per cent increase.

Enrollments in schools below the college level rose 20 per cent, from 148,000 to 178,000. G.I. farm training registered a 40 per cent increase, going from 25,000 to 35,000. On-the-job training increased the least—a 13 per cent rise from 53,000 to 60,000.

This year's sizable boost in the number of Korea veteran-trainees more than made up for the continuing decline in the number of World War II veterans still training under the original World War II G.I. bill, V.A. said.

On November 1, only 78,000 World War II veterans were enrolled in G.I. training—less than half the total of 169,000 in schools and training establishments a year ago. Yet the total number of G.I. trainees, World War II and Korea veterans together, was higher this year than last—693,000 on November 1, compared with 620,000 a year ago.



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## NEWS . . . . .

### Bates Adds Another Benefit for Faculty and Employees

LEWISTON, MAINE.—Effective January 1, Bates College will assume the cost of Blue Shield coverage for all members of its faculty and other regular employees.

"Two years ago," said President Charles F. Phillips, "Bates College assumed the cost of Blue Cross coverage for its faculty and other regular employees, thereby ensuring them against

the cost of hospitalization. This coming January we are adding, at no cost to our faculty or employees, Blue Shield coverage, which offers them protection against surgical cost. So far as we know, Bates is one of the first colleges to offer this extended coverage to members of its staff without cost to them."

The Bates College president emphasized that this new Blue Shield program is but one of several steps taken in recent years toward higher

standards of living for the faculty. The average faculty salary has been increased substantially. By vote of the trustees, all faculty members and staff workers are under the social security program. Also, the college long has been a member of the Teachers' Insurance and Annuity Association, which provides a retirement program with one-half the cost met by the college.

### City's Highest Civic Honor Goes to President of University of Omaha

OMAHA, NEB. — Dr. Milo Bail, president of the University of Omaha since 1948, was recently crowned King of Ak-Sar-Ben LXI, thus receiving Omaha's highest civic honor. Dr. Bail is the first educator to rule the mythical



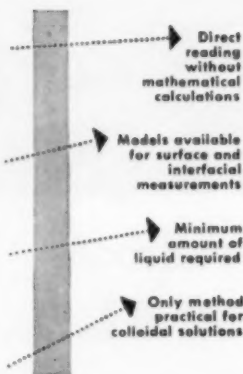
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No. 70545 (illustrated), for measurement of forces required to break liquid interfaces by both upward and downward movement of ring. Completely assembled with No. 70541A Torsion Wire; No. 70542 Platinum-Iridium Ring, 6 cm; olive green enameled case and directions . . . each \$335.00

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His Majesty, King of Ak-Sar-Ben

Kingdom of Quivira. Only on four occasions has anyone outside the business world received the coveted honor, three lawyers and a physician having been named to the throne in other years. Dr. Bail's selection also broke a "family roots" tradition in Omaha, inasmuch as he had lived in that city only seven years.

Ak-Sar-Ben (Nebraska spelled in reverse) is a nonprofit civic organization dedicated to the improvement of agriculture and education in Nebraska and the Middle West. Twelve businessmen founded the organization during the 1895 depression. Ak-Sar-Ben

## NEWS. . . . .

now boasts 20,000 members in 48 states.

Ak-Sar-Ben gives approximately 180 agriculture scholarships annually to college students attending the University of Nebraska and Iowa State College. It also has provided two toll-free bridges for Omaha (across the Missouri River), and five rescue squad units for the fire department at a cost of between \$12,000 and \$15,000 each.

### Alumnus Can Help His College Meet Costs of Oncoming Generations

NEW YORK CITY. — No student or his family ever pays the full cost of his college education. If he attends a state university, for example, the taxpayers of the state foot a good part of the bill. If he attends an independent, privately supported liberal arts college or a university, its friends (past and present) pay a good part of his expenses by way of accumulated gifts for capital or for current operating use.

These facts, long known to presidents and boards of trustees, are underscored by the results of a survey conducted during 1954 by the Council for Financial Aid to Education, a non-profit, advisory group founded by leading businessmen. In analyzing all data from the survey, including operating costs and student fees, the council divided the 753 responding colleges and universities into nine logical categories.

During the five-year period 1948-49 to 1953-54, institutions in all nine of these groups increased their average charges for student tuition and fees. Among 184 nondenominational, independent liberal arts colleges the average rise was 24 per cent, from \$441 to \$549. On the other hand, between 1947-48 and 1952-53 the average cost of operations per full-time student, among this group, rose by 46 per cent, from \$726 to \$1060. The cost per student to the institution, above his payments, rose by an even steeper 98 per cent, from \$201 to \$397.

The same trend holds among the other eight groups of colleges and universities that took part in the C.F.A.E. survey last year. In each category tuition and fees were increased, but the cost of operations per student outran these increases. In all except one category, the cost per student, above

his payments, went up by a still higher percentage. The highest average cost of operations per student was \$1065, among the 80 reporting professional and technological schools.

Privately supported colleges and universities attach increasing importance to the annual giving by alumni. Gifts to the alumni fund are a form of repayment of a loan by society. The amount of the repayment varies, of course, from institution to institution. Seattle Pacific College reports that it

has to raise \$100 a year a student from sources other than the tuition of \$320 paid by each student. Yale College has to provide \$1050 a year for each student, above his tuition payments.

Gifts by alumni to their colleges have double force. Business concerns, now being asked increasingly to help support the nation's colleges and universities, have a clearly stated preference for those whose alumni already are helping in a substantial

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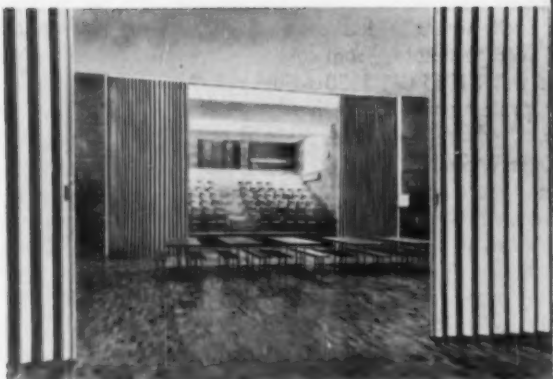
Send for literature which contains illustrations of case styles, complete construction details and specifications.



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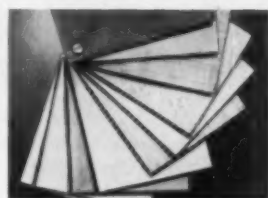
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## NEWS . . . . .

way. They regard their gifts as a supplement to, not a substitute for, alumni giving and think that one of the first tests of a good alumnus is his recognition of an opportunity to help the college that helped him, and also to make certain it will be able to serve future generations of students as well as it served him.

### Urges Institutions to Quit Competitive Battle

EAST LANSING, MICH. — State supported colleges and universities should end their fierce competition for students, for faculty, for prestige, and for money. So urged Harold L. Enarson at the annual meeting of the Association of Governing Boards of State Universities and Allied Institutions, which met here recently.

Most institutions are not even co-operating on a state basis, whereas many of the problems call for regional solutions, and these are even more difficult, Mr. Enarson said.

He told the 200 delegates that "the taxpayers probably would like to know how much it's costing them to support the wars between institutions. It's fantastic to find each of the nation's schools and universities blithely going its own way. You can't assume that we will be making wise use of the taxpayers' educational dollar if we permit 'education as usual.'"

Mr. Enarson made these five observations:

1. Each school tends to develop its programs with little reference to what other state institutions are doing.
2. No single school thinks in terms of the total educational problems of its state.
3. The existence of a number of schools guarantees a persistent competition for funds.
4. The struggle of each school for a "place in the sun" is likely to result in each trying to do everything, without reference to its neighbors.
5. It is difficult, if not impossible, for colleges and universities to plan together if they are not in harness together.

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## NEWS

recently when the 2000th diploma was awarded to Roscoe Sprang, foreman at Mansfield Sanitary Pottery, Inc., Perrysville, Ohio. His class brings to 2001 the number who have graduated from the program during the 125 weeks it has been offered. The 1000th diploma had gone to an employee of the same company, Rex Bowman, a foreman, in April 1953.

Started in 1951 as a joint effort of Wittenberg and the Springfield Chamber of Commerce, management

development was planned to enable local industries to develop their own supervisory personnel through the use of the college's facilities. Since then the program has expanded into a nationwide project serving industries in 11 states as far west as Nebraska and Oklahoma and east to Connecticut. Ninety-seven companies have participated.

The program brings first-line management people from business and industry to Wittenberg's campus for a

five-day, 40 hour week of intensive study in human relations, personal development, business operations, and economics. Employers pay the supervisors their regular salaries during the week they are on campus and also pick up the bill on the tuition cost of \$50.

When first started, the program was offered on one level but top management has recognized that this type of intensive training can not be a "one-shot" process. Three levels are consequently being offered with expanded emphasis on the same subjects. Completion of the first two levels is prerequisite to entering the next level.

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### Offers Suggestions in State Scholarship Plan

CHICAGO.—A state scholarship plan which would assist students to go to any college or university in Illinois was endorsed by David Dodds Henry, president of the University of Illinois, as he spoke to the Executives Club here at a recent meeting.

"A state scholarship plan would be a real investment in the superior youth of the state, and would be of considerable encouragement to those private institutions that could enroll large numbers of students without increasing overhead or direct expenditures," President Henry declared.

"It is encouraging to note that the Illinois State Study Commission on Higher Education is giving consideration to the desirability of a state scholarship plan, and that Gov. William G. Stratton has expressed support for the general idea."

President Henry suggested a three-point plan which would: (1) give the student freedom of choice of institution, public or private; (2) award the scholarship on merit and need; (3) make the award in proportion to the tuition the student would be paying.

Speaking for cooperation among all educational institutions of the state, President Henry declared: "We must not take the view that there is a pot of money for education for which each of us must compete in a way that a larger share for one means less for someone else. Our competition as institutions is not with one another, but with public apathy."

"The welfare of higher education is indivisible," he said. "What helps any one, helps all; what helps the group, or hurts it, helps or hurts each one in

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## NEWS . . . . .

some measure. There is more work to do than all of the institutions put together will get done."

### NAMES IN THE NEWS

E. Kelly Thompson, public relations director and former executive assistant to the president of Western Kentucky State College, Bowling Green, was named by the board of regents to the post of president. His predecessor, Paul L. Garrett, resigned recently.

Courtney C. Brown, dean of the Graduate School of Business at Columbia University, has been named vice president in charge of business affairs. As vice president, Dr. Brown will have supervision over all business and academic activities of the university. He will continue in his present position as



Courtney C. Brown

dean of the Graduate School of Business.

Dr. Carter Davidson, president of Union College, Schenectady, N.Y., has been appointed a member of the joint advisory panel on R.O.T.C. affairs, a functioning body of the Reserve Forces Policy Board. In his new capacity, Dr. Davidson succeeds Everett N. Case, president of Colgate University, former chairman of the panel. He was nominated to the post by Dr. Arthur S. Adams, president of the American Council on Education.

Three appointments to major administrative positions at Pennsylvania State University were revealed in an announcement by Milton S. Eisenhower, president. Effective July 1, Dr. Eric A. Walker, dean of the College of Engineering and Architecture, will



Eric A. Walker



Kenneth R. Erfft



Lawrence E. Dennis

become vice president of the university, and Dr. Kenneth R. Erfft, now associate controller, will become controller and treasurer. Lawrence E. Dennis, administrative assistant to the president, will become provost following the retirement of Adrian O. Morse on or before June 30. Dr. Erfft will succeed Samuel K. Hostetter, who has been a member of the administrative staff of Penn State since 1908.

Agnes E. Meyer, militant defender of academic freedom and advocate for federal aid for education, was named recipient of the Wayne University Education Award for 1955. The presentation of the award was made November 15 by Vice President Arthur Neef.

Norman P. Auburn, president of the University of Akron, Akron, Ohio, was elected president of the Association of Urban Universities at the organization's 41st annual meeting in Milwaukee. Other association officers include: vice president, Dr. Philip Davidson, president of the University of Louisville, Louisville, Ky.; secretary-treasurer, Dr.

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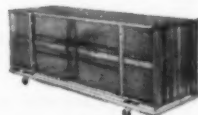


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## NAMES . . . . .

Robert Van Houten, president of Newark College of Engineering, Newark, N.J. Dr. Auburn was appointed president of the University of Akron in 1951; before that he was vice president of the University of Cincinnati.

Rev. Robert E. Tinker, former business manager and recently named director of development at the Chicago Theological Seminary, has been elected vice president in charge of development at the seminary, according to an announcement by Dr. Arthur Cushman McGiffert Jr., president. The Rev. Mr. Tinker served pastorates in Evanston, Glenview and Chicago before joining the staff of the Chicago Theological Seminary in 1947 as assistant business manager.



Rev. R. E. Tinker

Dr. Edwin B. Williams, provost of the University of Pennsylvania, will resign his post January 31 to devote full time to teaching and research. He was elected provost in 1951.

William W. Monahan, graduate manager of the Associated Students of the University of California at Berkeley from 1926 to 1936, has been named business manager of the University of California, Berkeley campus. He succeeds William J. Norton, retired. Mr. Monahan returns to university work from a business career, primarily spent in Honolulu as vice president of American Factors, Ltd.



William W. Monahan

E. J. Junior, a recent participant in the intern training program for college business officers at Tuskegee Institute in Alabama, has been named manager of auxiliary enterprises at Southern University, Baton Rouge, La. Mr. Junior completed his intern training program in September 1955.

S. Mouri, formerly assistant bursar of the University of Kansas City, has recently been named bursar. He first joined the university staff in 1946 following army service in the military intelligence under General MacArthur's headquarters.

(Continued on Page 62)

## KODAK'S SENSATIONAL VERIFAX COPIER

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## DIRECTORY OF ASSOCIATIONS

### Associations of College and University Business Officers

#### American Association

President: J. B. Clarke, Howard University; secretary: B. A. Little, Southern University.

#### Canadian Association of University Business Officers

President: A. G. Rankin, University of Toronto; secretary-treasurer: E. A. Wilkinson, Hart House, University of Toronto.

#### Central Association

President: C. C. DeLong, University of Illinois; secretary-treasurer: T. N. McClure, Knox College.

Convention: May 6-8, University of Notre Dame, Notre Dame, Ind.

#### Eastern Association

President: W. R. Hendershot, New York University; secretary-treasurer: Irwin K. French, Wellesley College.

Convention: Dec. 11-13, Chalfonte-Haddon Hall, Atlantic City, N.J.

#### Southern Association

President: Wendell M. Murray, North Carolina State College; secretary: C. O. Emmerich, Emory University.

#### Western Association

President: Gerard Banks, College of Puget Sound; secretary: Kenneth A. Dick, University of Idaho.

#### National Federation of College and University Business Officers Associations

President: Nelson A. Wahlstrom, University of Washington; vice president: Henry Doten, University of Maine; secretary-treasurer: C. H. Wheeler III, University of Richmond.

#### American College Public Relations Association

President: Bradford D. Ansley, Emory University; executive secretary: Marvin W. Topping, 726 Jackson Place, N.W., Washington 6, D.C.

#### Association of College Unions

President: Frederick Stecker, Ohio State University; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Convention: April 8-11, Purdue University, West Lafayette, Ind.

#### College and University Personnel Association

President: Arlyn C. Marks, State University of Iowa; secretary-treasurer: Elwood C. Clark, Rutgers University; executive secretary: Donald E. Dickason, University of Illinois, Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: Aug. 5-8, Cornell University, Ithaca, N.Y.

#### National Association of College Stores

President: E. Lyle Goss, University Book Store, Seattle; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

Convention: April 15-18, Statler Hotel, Boston.

**National Association of College and University Housing Officers**  
President: F. C. McConnell, University of Texas; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

#### National Association of Educational Buyers

President: D. R. Kimrey, University of Oklahoma; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

**National Association of Physical Plant Administrators of Universities and Colleges**  
President: C. B. Jensen, University of Wyoming; secretary-treasurer: A. F. Galistel, University of Wisconsin.

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**MOST SATISFYING to every student . . .**

- Students look forward to shower bathing that will banish fatigue from work or play and restore the feeling of fitness. But just *any* shower head won't satisfy. To win enthusiastic approval, provide the *Act-O-Matic* cone-within-cone spray that delivers an evenly distributed and never distorted shower, directed as desired, and with fingertip volume control.

**...and BEST FOR YOU because:**

1. Automatically Self-Cleaning—
2. No Clogging—
3. No Dripping—
3. Most Satisfying Spray—
4. No Stream Distortion—
5. Finger-Tip Control—
6. Spray Direction Adjustable—
7. Big Water Economy—
8. Saves Costly Fuel—
9. Requires No Servicing—
10. Simple, Reliable, Long-Lasting—
11. Easily, Quickly Installed—
12. Vandal-Proof Models Available

The **SLOAN**  
*Act-O-Matic*  
**SHOWER HEAD**  
•  
**AUTOMATICALLY SELF-CLEANING**  
*each time it's used*

Your Plumber can supply you, or write to us for folder containing full information

**SLOAN VALVE COMPANY**  
4348 WEST LAKE STREET • CHICAGO 24

# LIFETIME beauty and service



## SCHOOL FURNITURE SCHOOL LOCKERS

**ASE QUALITY...CHEAPER BY  
THE YEAR AS THE YEARS GO BY**

For new schools...for old schools...you couldn't make a wiser choice. ASE Steel School Furniture and School Lockers have proved themselves on every type of installation...all over the country. Write now for more information about this outstanding line of quality school furniture and equipment.



No. 6629  
PRINCIPAL'S DESK



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LOCKERS



No. 6647  
TEACHER'S DESK



No. 835  
PRINCIPAL'S CHAIR



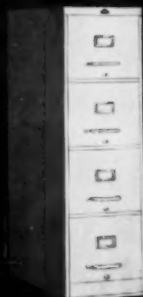
No. 3487  
STORAGE CABINET



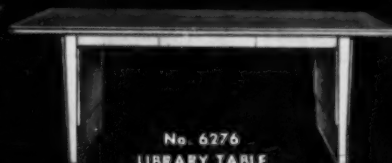
DOUBLE-TIER  
LOCKERS



BOX LOCKERS



No. 5401  
FILE



No. 6276  
LIBRARY TABLE



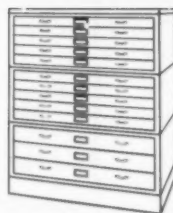
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Chair



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Please send complete information on

School Furniture ☐ Desks and Tables ☐ Chairs ☐

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We are building a new school ☐

Adding Equipment ☐

Name \_\_\_\_\_

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**ALL-STEEL EQUIPMENT INC., Aurora, Illinois**

*Write for complete information. There's an ASE dealer near you.*

## NAMES. . . . .

(Continued from Page 59)

Rev. John W. Murray was appointed president of Shelton College, Ringwood, N.J., on November 15 to succeed Dr. Oliver Buswell Jr. The Rev. Mr. Murray was promoted to the presidency from the college faculty. Shelton is a private coeducational liberal arts and terminal-occupational college.

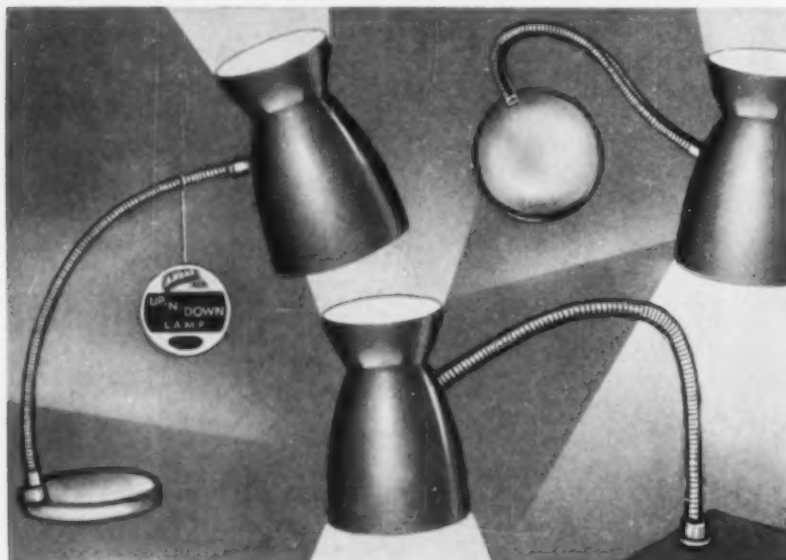
Dr. William L. Bryan, president emeritus of Indiana University, died recently in his home on the university campus in Bloomington, Ind. The 95

year old educator had been critically ill for 10 days. Dr. Bryan had been president of the university from 1902 to 1937.

John O. Moseley, former president of the University of Nevada, Reno, died recently at 62 years of age.

Rev. W. Coleman Nevils, 77, former president of Georgetown University, Washington, D.C., died recently.

Morgan L. Combs, president of Mary Washington College, Fredericksburg, Va., died recently at the age of 63.



*Faries*

**UP LIGHT FOR  
DORMITORY DESKS**

**REDUCES EYE FATIGUE • CUTS EXPENSES**

• "Up Light" helps to reduce shadows and dark spots that cause eye-strain. Since air flows up and through the shade, carrying off heat, it is a cooler, more comfortable light. And less heat in the shade means light bulbs last longer! Models illustrated set on desk, or hang up for wall lamps. Also furnished with ferrule mount for semi-permanent mounting in desk top.

Faries new Dormitory Desk Lamps are available in a wide assortment of adjustable, built-in, and portable-type units (both incandescent and fluorescent) to meet every dormitory requirement. Send today for our lamp brochure that shows you how to obtain operating economy, durability, easy maintenance PLUS SCIENTIFICALLY-CORRECT DESK LIGHTING!

**AND WRITE FOR YOUR FREE COPY OF OUR SPECIAL BULLETIN,**

"Highlights of Faries Research on Student Lighting"

*Faries*

**LAMP DIVISION • ELWOOD, INDIANA**  
Manufacturers of Student Lamps Since 1880

## Classified Advertising

### POSITIONS WANTED

**Administrative**—Position desired by one experienced in investments, management of trusts, and with a legal background; reasonable salary requirements. Write Box CW-266 COLLEGE AND UNIVERSITY BUSINESS.

**Controller, Business Manager, Treasurer**—Successful college treasurer and business manager thirteen years; college teaching in business administration four years, experienced in accounting, budget preparation and control, financial reporting, purchasing and plant maintenance; have understanding and imagination; presently employed in college; desire change. Write Box CW-276 COLLEGE AND UNIVERSITY BUSINESS.

**Executive**—With twenty-five years experience in office and business management in large midwest university; publishing and accounting training and background; desires responsible position in college or university. Write Box CW-278 COLLEGE AND UNIVERSITY BUSINESS.

### POSITIONS OPEN

**Assistant Manager of Dining Halls**—Midwest university, all male boarding school; position available immediately; desire mature young man who has had university training and experience in institutional feeding; send full information regarding age, education, experience, etc. Write Box CO-177 COLLEGE AND UNIVERSITY BUSINESS.

**Budget Specialist**—In large, non-profit organization; male, married, 30-45 creative ability in devising and administering budgets; ability to win cooperation in new procedures; interested in career in complex budget control area; analysis, synthesis, etc.; locate in delightful suburban town. Write giving educational and work background, and salary requirements, Personnel, EDUCATIONAL TESTING SERVICE, Princeton, New Jersey.

**Superintendent of Buildings and Grounds**—Age 35-50, some training or experience necessary; send late photo and write details of age, training, experience, and salary requirements to Business Manager, TEXAS LUTHERAN COLLEGE, Seguin, Texas.

**Superintendent of Buildings and Grounds**—At engineering College; state age, experience, education, salary requirements; give complete information with application. Write E. D. DAKE, Vice President, SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY, Rapid City, South Dakota.

### FOR SALE

**COMPLETELY MODERN CAMP**

Located on small lake in Northwestern Wisconsin; ideal for summer conference and employ vacation use. Write Box CS-2 COLLEGE AND UNIVERSITY BUSINESS.

*Rates for classified advertisements are: 20 cents a word; minimum charge, \$4.*

*(No charge for "key" number.)  
Forms close 25th of month  
preceding date of issue.*

**COLLEGE AND UNIVERSITY  
BUSINESS**

**919 N. Michigan Avenue  
Chicago 11, Ill.**

COLLEGE and UNIVERSITY BUSINESS

# WHAT'S NEW

December 1955

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 84. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

## Thermostatic Shower Control Is Easily Installed



An advanced style trend in thermostatic shower control is offered in the new Powers Type H Hydroguard. The rectangular dial in two-tone chrome finish is an interesting and attractive departure from the conventional round dial. Another Powers feature is the new Triple Duty Strainer-Check-Stop. These fittings, located behind the Hydroguard dial, reduce installation cost and improve appearance. Only one hole for piping must be made in the tile wall.

Attractive appearance and compact arrangement of the triple duty fittings make the Hydroguard particularly applicable for institutional use. In addition to the new features, it retains the traditional safety and comfort provided by Powers thermostatic control. **Powers Regulator Co., 3400 Oakton St., Skokie, Ill.**

For more details circle #854 on mailing card.

## Mobile Service Unit for Automatic Ice Maker

A new unit for quick and easy handling of flaked ice is available in the new Mobile Ice Service Unit. Combining the York FlakIce Ice Maker and a Gennett Ice Cart, the unit simplifies transport of ice to places of need.

The Model DER-2B York FlakIce Automatic Ice Maker rests on a specially designed stand with an opening underneath. The Gennett Ice Cart is placed in position and the machine turned on. The automatic thermostat control stops the ice making operation when the cart is full, the machine is turned off and the cart withdrawn. The ice maker is put in operation when a new cart is placed in position.

Time and motion are saved with the dual unit. The compact York ice maker can be located in the kitchen with the Gennett carts automatically loaded for carrying the ice where needed. The

completely self-contained ice making unit has a hermetically sealed refrigeration circuit and can produce up to 300 pounds of clear ice fragments per day. The ice carts are available in capacities of 50, 75, 150 and 250 pounds. They are constructed of stainless steel inside and out with three inches of insulation for use as service cabinets or ice storage bins. **York Corporation, York, Pa., and Gennett & Sons, Inc., Richmond, Ind.**

For more details circle #855 on mailing card.

## Waste Receptacle Has Increased Capacity

The Nibroc Tamp is a new waste receptacle with an automatic tamper for increased capacity. Each time the foot pedal opens, the automatic tamper operates to store waste into a compact bale in a wet-strength paper bag. It is a fire prevention feature, makes for neat appearance and cuts maintenance costs.



Disposal is made easier and paper does not clutter floors since the receptacle cannot run over. The New Nibroc Tamp is available in two models, with or without a Nibroc towel dispenser attached. **Brown Company, 150 Causeway St., Boston 14, Mass.**

For more details circle #856 on mailing card.

## Gotham Colorboard in Twelve Colors

A selection of twelve attractive colors, to blend or contrast with the classroom interior, is available in the new Gotham Colorboard. Colorboard is available in all Gotham Composition Chalkboards, including  $\frac{1}{4}$  and  $\frac{1}{2}$  inch Structo-Board Chalkboard;  $\frac{1}{4}$  inch Presdwood Chalkboard;  $\frac{1}{4}$  and  $\frac{1}{2}$  inch Tempered Presdwood Chalkboard, and FlexBoard Chalkboard. Chalkboards can be blended

or contrasted with Color Cork bulletin boards in any combination to make up the Gotham Colorboard desired.

The hues and shades in the new line were scientifically selected and include Black, Mist Grey, Charcoal Grey, Standard Green, Sunshine Yellow, Aqua Blue, Desert Tan, Earth Brown, Powder Blue, Cobalt Blue, Sage Green and Hemlock Green. The choice is wide, and the manufacturer states that the cost is no more than ordinary chalkboard. **Gotham Chalkboard & Trim Co., Inc., 91 Weyman Ave., New Rochelle, N.Y.**

For more details circle #857 on mailing card.

## Two-Pupil Desk Can Be Stacked

A stacking desk is now available for two pupils. It has a long work surface, measuring 20 by 48 inches, yet accommodates two pupils in minimum space for adequate facilities. The functional double desk stacks out of the way to create free areas for group activities. In use, it may be grouped flush with other Brunswick desks to form larger work areas for group projects.

The rugged self-supporting frame gives the desk strength and a natural resiliency, while keeping the legs free of confining braces. All frames are of heavy gauge, tempered tubular steel. Legs are tapered and thickened for strength and shock absorption. Specially compounded rubber bumpers on all desks prevent scratching when stacked. Large case hardened steel floor glides protect floor surfaces and fit tightly into the resilient non-marking neoprene rubber feet.

The desk top is made of natural maple plywood and is also available with plastic surface. Individual book shelves have a downward slope for more leg freedom and to hold supplies in place even when the desk is moved or stacked. The new desk is easily moved and can also be used



as a table. It is available in five heights. **Brunswick-Balke-Collender Co., 623 S. Wabash Ave., Chicago 5.**

For more details circle #858 on mailing card.

(Continued on page 64)

## What's New . . .

### Flexible Arm Lamp Has "Kold" Shade

The new Faries adjustable incandescent lamp for close work features the new "Kold" shade. Users are protected from burns since even after continuous burning of a 100 watt bulb, the outside shade is cold to the touch. The flue effect of the shade draws off the heat with a fast up-current. A new method of radiation and reflection also eliminates heat in the "Kold" lamps. The Faries new universal "Friction Free" adjustment employs the gravity principle giving virtually unlimited frictionless adjust-

ments. The new lamp arms extend from 12 to 38 inches and lamps are available in a total of eight types in both fluorescent and incandescent. **General Lamps Mfg. Corp., Faries Lamp Division, Elwood, Ind.**

For more details circle #859 on mailing card.

### Microfilm Reader Doubles as Enlarger and Printer

Enlarged prints can be made directly from the microfilm with the new desktop microfilm reader. Known as the Inspector "200," the unit is especially con-

structed to accommodate all Filmsort jackets and aperture cards for scanning and printing. With the Auto-Scan accessory it can also be used for mechanical scanning. Cards are held in focus for mechanical operations. By opening out the top, photo copying paper may be inserted behind the screen and the microfilm image projected directly on paper.

The new bottom throat design of the Inspector "200" makes it easy to insert



cards at desk level. A special ventilating system eliminates possibility of heat damage to film and cards. It is available with 16x, 24x and 30x standard magnifications. The new unit occupies 13 by 19 inches of desk space. **Filmsort Div., Dexter Folder Co., Pearl River, N. Y.**

For more details circle #860 on mailing card.



# 40% OFF!

**N**O matter how it is dispensed, the ability of a paper towel to dry the hands is the most important thing about a towel service. That's why Mosinee TURN-TOWL service *tops* anything in its field. There is not another controlled-type cabinet on the market, dispensing towels that can match the quality of Mosinee Turn-Towls.

And as for reducing towel consumption — read this, "A mid-western college with 800 students switched from low-cost ordinary towels to Turn-Towls. The maintenance engineer claims they are now using 40% fewer towels."

### BAY WEST PAPER CO.

1110 West Mason Street, GREEN BAY, WISCONSIN

A Division of Mosinee Paper Mills Co.



## MOSINEE

## Sulphate Towels

PREP-TOWLS • ZIP-TOWLS • TRIM-TOWLS • TURN-TOWLS • ROLTOWLS • BATH-TOWLS

### Voltage Controller in Midget Size

The new Fisher Midget Voltage Controller occupies only 4 by 4 by 4 inches of space in the laboratory or other area with instruments requiring a voltage less than that at the available outlets. The instrument to be regulated is merely plugged into the convenient outlet in the rear of the small variable transformer and the Controller is connected to a nearby power line. A graduated scale on the face permits duplication of any setting. **Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.**

For more details circle #861 on mailing card.

### Lab-Cote Floor Finish Is Easily Maintained

A new resilient floor finish is available under the name of Lab-Cote. It is a hard, easily maintained dressing which gives a clear, transparent protective film to all flooring surfaces. Lab-Cote is said to resist soil absorption, to have high anti-slip qualities and to give long wear. It can be buffed to restore its luster and is easily removable for thorough floor cleaning. **Chemical Service of Baltimore, Inc., Howard and West Sts., Baltimore 30, Md.**

For more details circle #862 on mailing card.  
(Continued on page 65)

## What's New . . .

### Large-Capacity Truck Is Easy Rolling

The new King-Size Utility Truck has three 21 by 35 inch shelves. It will accommodate six 111 utility pans and is constructed to carry up to 500 pounds. It serves as an extra heavy-duty utility cart or dish truck and has rubber bumpers on handles and corners. Constructed of stainless steel, the new Lakeside Model 444 is 37½ inches high. It moves easily



on 5 inch diameter casters, two ball-bearing swivel and two fixed, with roller-bearing axles. Lakeside Mfg. Co., 1977 S. Allis St., Milwaukee 7, Wis.

For more details circle #863 on mailing card.

### Portable Machine Saves Repetitive Writing Task

An hour's manual work can be done in minutes with Model 30 Addressograph machine. The new portable machine works in conjunction with the Addressograph metal plate and features a new long-life carbon ribbon which is specially processed to keep the plates clean. Addressograph-Multigraph Corp., 1200 Babbitt Rd., Cleveland 17, Ohio.

For more details circle #864 on mailing card.

### Portable Peeler Has Time Control

The new Model A-2-B-15 Bench Peeler has a mark timer to control the length of peeling time. The unit is compactly built for use on work tables, counters or in sinks. It is ready for operation by plugging in the electric lead cord and attaching the water supply line.

The wavy surface of the peeling disc rotates and tumbles potatoes for uniform peeling from the abrasive surfaces on both peeler disc and cylinder wall. The water supply flushes peel refuse through the waste outlet. The cylinder is of stainless steel with a red plastic cover and the unit is equipped with carrying handles. A base mounted on wheels and containing a built-in peel trap is available as optional equipment. Toledo Scale Co., 1023 Telegraph Rd., Toledo 12, Ohio.

For more details circle #865 on mailing card.

### Colloidal Silica Is Soil Retardant

"Ludox" colloidal silica is a product of Du Pont research. It is a chemical used in formulation to treat rugs and carpets, fabrics, painted walls, wall paper and other surfaces to prevent dirt and soil from becoming embedded. "Ludox" does its work as a soil retardant by filling up the microscopically small pits and crevices, known as soil receptor sites, contained in all surfaces in varying degrees. Once the tiny particles of silica fill the soil receptor sites, the dirt must remain on the surface and is easily removed.

"Ludox" colloidal silica particles are so small that about 600 million would be required to cover the head of a pin. They are therefore small enough to enter and protect any site receptive to soil. The anti-soil solution is colorless, odorless, non-flammable and safe for use. It is available commercially through the floor covering industry and other applications will soon be announced. Patents are issued by Du Pont to manufacturers using the product. E. I. du Pont de Nemours & Co., Wilmington, Del.

For more details circle #866 on mailing card.



Pre-built units matching standard Huntington patterns are effectively used at Morris Harvey College, Charleston, W. Va., by architect Charles A. Haviland, A.I.A.

You're sure of top quality when you specify

## HUNTINGTON Pre-Built Units

"Made better to look better and last longer"

Complete specifications and detail drawings are available, based on recommendations by leading architects, and covering every aspect of materials and assembly.

Ready for installation on delivery, these pre-built units require no further carpentry or finishing. On-the-site millwork cannot duplicate Huntington's high-quality cabinet work, eye-appealing appearance, solid construction in durable hardwoods, easy and inexpensive maintenance.

Harmonious unified effects are achieved by matching styles and finishes of standard and custom-made pre-built units with Huntington's over 179 versatile seating, sleeping, and case goods patterns.

Economical prices reflect the savings created by high-volume production, with rigid quality controls maintaining Huntington standards of excellence. All costs can be included in construction charges under FHA mortgage requirements.



HUNTINGTON CHAIR CORPORATION  
Huntington, West Virginia  
Showrooms: Huntington  
New York • Chicago • Miami



For specifications and detail drawings, along with information on how Huntington pre-built units will meet your needs at low initial cost and low upkeep cost, simply cut out this coupon and send it with your organization letterhead today—without any charge or obligation.

"Huntington's good taste and high quality are always impressive, never expensive."

(Continued on page 66)

## What's New . . .



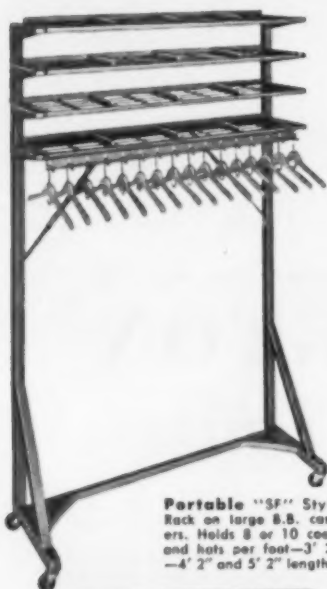
# Checker®

## COAT and HAT RACKS

Leading architects and outfitters specify Checker Wardrobe Equipment to save space and hold wraps in an efficient, sanitary and orderly manner. Hats rest on high ribs in slotted shelves. Spaced hangers keep coats apart, open to light and air, visible and instantly available. "Portable" units go wherever needed on large casters. "Stationary" units come on glides and can be anchored to floor. All are correctly engineered to interlock on left or right and to stand rigidly. They will never tip over, sag, sway, creak or wobble. Built for lifetime service of strongly welded heavy gauge steel and square tubing. Beautifully finished in modern baked enamel finishes. They are vermin-proof and fire-proof.



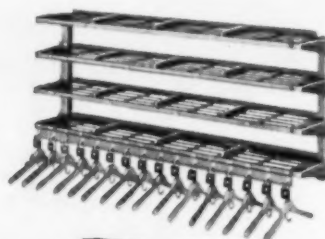
**Portable "DF" Style**  
Rock on large 8.8. casters. Holds 8 or 10 coats and hats per foot—3' 2" —4' 2" and 5' 2" lengths.



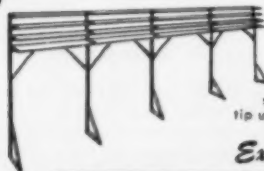
**Portable "SF" Style**  
Rock on large 8.8. casters. Holds 8 or 10 coats and hats per foot—3' 2" —4' 2" and 5' 2" lengths.



**Stationary DF Style** without casters or cross braces. Units lock together to make continuous double faced rack of any length. Allow 2" for end columns, 1 1/2" for intermediate column.



**"WM" Wall-mounted Racks** in 3 ft., 4 ft. and 5 ft. units serve as independent racks or interlock to make continuous wall rack. Accommodate 4 or 5 persons per foot.



**Stationary "SF" Style** Racks also available in interlocking 3 ft., 4 ft. and 5 ft. sections. Fit snugly against wall—will not tip under heavy loads.

### Exclusive Checker Features



New add-on feature—shelves spring-lock to right or left of bracket arms to make racks of any desired length.

New "on hook" tags eliminate checking errors, speed service and prevent empty hangers from being knocked off bar.

New beautifully embossed lucite numbers snap onto shelves. Each hat and hanger space is numbered.

Checker Coat Racks can be quickly converted from hanger type to hook type.



## Manley Coliseum Dispenses Drinks and Popcorn

A combination of a Manley Ice-O-Bar for soft drinks and a Manley Display Console Popcorn machine is offered in the Coliseum Model. The two faucet drink machine has a capacity of one



thousand soft drinks hourly when an adequate supply of cool water is available. It is a small compact unit with a reserve cold storage space in the refrigerator compartment for additional syrup.

The popcorn machine has an Aristocrat cascade kettle and an elevator warmer which will hold 72 one and one-half ounce popcorn cartons. It is available with either a twelve ounce or a sixteen ounce kettle. The Coliseum Model offers a compact snack bar unit occupying minimum space. It is attractive in appearance and easy to maintain in lunchrooms, recreation areas, student unions and other locations. Manley, Inc., 1920 Wyandotte St., Kansas City 8, Mo.

For more details circle #867 on mailing card.

## Vinyl Wall Covering in Variety of Patterns

Leaves, grass, swirling threads, woven cloth and other delicate materials are incorporated into rigid vinyl sheets to make the new Lam-O-Wall wall covering. Rich color, clarity and resistance to dirt or wear are offered in the new laminate employing Bakelite rigid vinyl sheet construction. The new wall covering combines long life and ease of maintenance with attractive appearance.

Unique patterns are achieved by catching the natural beauty of free-falling yarns, metallized or glass thread nets, hemplike woven fibers, laced bamboo strips, feathers, leaves, exotic grasses and other natural materials in opaque Bakelite rigid vinyl sheet. Eight basic background colors are available. Surface textures include satin, semi-gloss and rough textured finishes. Lam-O-Wall can be applied to clean, dry plaster, masonry, wood, glass, ceramics, concrete blocks and dimensionally stable composition boards. Laminated Plas-Tex Corp., 1427 W. North St., Springfield, Ohio.

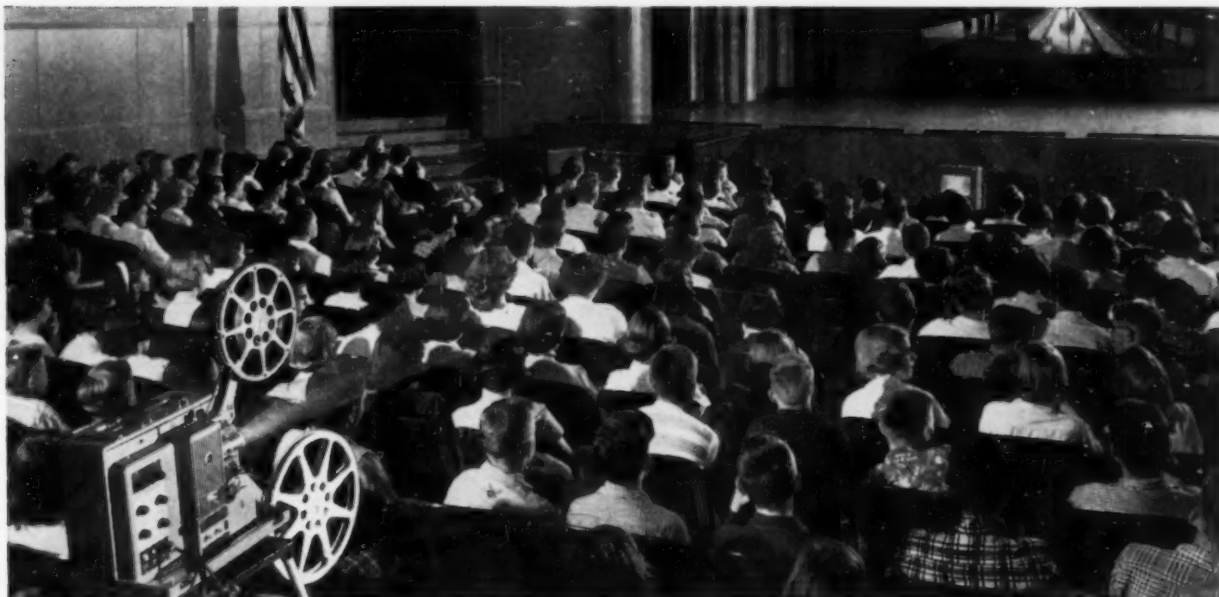
For more details circle #868 on mailing card.

(Continued on page 68)

## VOGEL-PETERSON CO.

1127 West 37th Street

Chicago 9, Illinois



## Brighter sound movies...from 'way back here

Sometimes it's a problem to put on sound movies for an audience in a big hall. You try to project your film over the extra-long "throw" and the picture seems to fade—especially in a poorly darkened room.

But now you can get the brilliance you need with the new Kodascope Pageant Sound Projector—at sound speed it delivers 40% more light to your screen! And that's not all...

### New shutter gives two-in-one versatility

In the past, 16mm. sound projectors gave you a choice of either two-speed versatility or extra light power. Then Kodak engineers perfected the ingenious new Super-40 Shutter, which can project more than 40% more light at sound speed than can standard shutters, and can also automatically shift blades to permit maximum light for silent-speed projection.

This shutter is now built into all Pageant audio-visual models. And you can take advantage of its remarkable abilities at no increase in price over the previous Pageants!

### Enjoy outstanding performance —for years

The Super-40 Shutter is but the newest of many Pageant benefits. Permanent pre-lubrication, for instance, lets you bypass the danger of improper oiling, main cause of projector breakdowns. Fidelity control helps you get the best quality from any photographic sound track. A built-in field-sharpening element keeps your pictures sharp over your whole screen area.

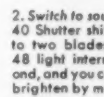
### Pick your Pageant with this experienced help

The new Pageant Projectors with Super-40 Shutters are available with either 7- or 15-watt outputs; 8" or 12" speakers; single- or double-case portability. Each has been designed to meet specific requirements. To pick the model that best meets yours, ask your experienced Kodak Audio-Visual Dealer for his advice. He will give you a demonstration, details, and analysis of your projection needs with no obligation to you. If you prefer, send the coupon for a catalog first.

### Here's how the amazing new SUPER-40 Shutter gives you complete projector versatility



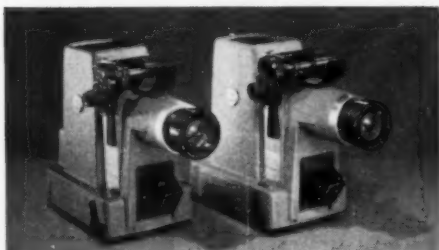
1. Switch on at silent speed. The Super-40 Shutter automatically presents three shutter blades to produce 48 light interruptions per second, conforming to accepted motion-picture-industry projection practice.



2. Switch to sound speed. Super-40 Shutter shifts automatically to two blades. There are still 48 light interruptions per second, and you can see the picture brighten by more than 40%!



3. Or lock the shutter in 3-bladed position when you don't need the extra brilliance. (To return to automatic shifting, just release the locking lever.)



### New Signet Filmstrip Projectors give top performance—even with worn or damaged films

To deliver smooth, quick, reliable performance—with filmstrips new and old—all Model 2F Kodaslide Signet Filmstrip Projectors now have a new, improved, enclosed film-advance mechanism. (This can be removed, if you wish, for standard 2 x 2 slide presentations.)

You enjoy bright, sharp pictures, too. All models have Kodak Ektanon Projection Lenses, Lumenized lens-and-condenser systems. These new Signets are available in 500- or 300-watt models. Ask your Kodak Audio-Visual Dealer to help you choose the best one for your needs and budget.

### WHAT A-V EXPERTS SAY ABOUT PAGEANT PRE-LUBRICATION

"In my book, the lifetime lubrication feature of the Kodascope Pageant puts this projector lengths ahead of the field. It's the most important improvement in sound-projector design in many a year."

E. S. Moore, The S. Spencer Moore Co. Charleston, W. Va.



"We know of Pageant Projectors that have been running for three years and more with only periodic checkups. Permanent pre-lubrication eliminates all the repairs necessitated by improper oiling."

R. H. Sorber, Triple S Camera Shop Ukiah, California



EASTMAN KODAK COMPANY, Dept. 8-V, Rochester 4, N. Y. 12-96

Send name of nearest Kodak Audio-Visual Dealer and information on:

☐ Kodascope Pageant Sound Projector

☐ Kodaslide Signet 500 and 300 Projectors, Filmstrip Models

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

ORGANIZATION \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ (Zone)

**Kodak**  
TRADE-MARK

## What's New . . .

### Plastic Luminaire Provides Comfortable Lighting

Plastic sides and louvers are employed in the new Smithcraft Cleer Luminaire.



The shallow, modern design gives comfortable lighting and is especially suited for installation in low ceiling areas. It is wider than the conventional fixture and affords a high transmittance of glare-free lighting. Spring clips hold the louver at a convenient level for re-lamping and cleaning and the metal bound side panels are easily lifted out.

The Smithcraft Cleer is available for two or four Rapid-Start Bi-Pin lamps in four and eight foot lengths, and for two or four T12 slimline lamps in eight foot lengths. Smithcraft Lighting Div., Chelsea 50, Mass.

For more details circle #869 on mailing card.

### Redesigned Bioscope Is Self-Contained

Its own case, into which the instrument can be folded when not in use, protects the new Bioscope Master Model "20." The new unit is especially designed to project specimens downward on a table for small group study or on a screen for class use.

The new model is constructed of strong, long lasting plastics which make it easy to keep clean and attractive and have reduced its weight. It is waterproof, stainproof and acid resistant. All extra parts can be stored in the dustproof case which reduces the amount of storage space required when the instrument is not in use. Every type of prepared slide and living material can be shown by microprojection in the new model without harmful heat on any specimen. The Bioscope Mfg. Co., P. O. Box 1492, Tulsa, Okla.

For more details circle #870 on mailing card.

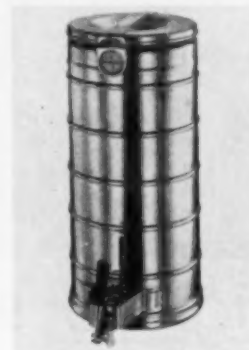
### Beverage Dispenser Has Seamless Construction

There are no seams, cracks or joints in the inside container of the new Mealpack Beverage Dispenser. It is therefore easy to keep clean and sanitary. The one-piece seamless, deep-drawn inner container construction is protected by insulated-vacuum to keep contents hot or cold

(Continued on page 70)

until served. A patented "Sealock" device locks the lid after the container is filled. "Sealock" Discs permit labeling of contents and guard against the dispenser being opened. The triple bottom construction prevents breakage in case of dropping or jarring as there is adequate separation between inner and outer shell.

Model MP7BD Mealpack insulated vacuum beverage dispensers have a capacity of seven quarts of hot or cold liquid. Model MP5BD contains five quarts. A guard protects the serving



spigot which meets all sanitary requirements. The spigot is easy to clean and has fast pouring action for serving. Mealpack Corporation, 2014 Ridge Ave., Evanston, Ill.

For more details circle #871 on mailing card.

## the shell chair

- formed to the human contour
- made of molded plywood with melamine surface
- protected from ordinary hazards of use



A 5642 18" h.  
B 5622 10 to 18" h. C 5662 18" h.  
Brown shell, black steel tubing  
base with rubber cushion glides.

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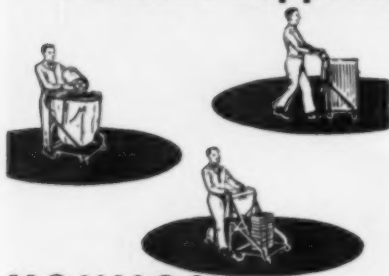
**HILLYARD CHEMICAL CO.**  
St. Joseph, Mo.

Please have a Hillyard Maintaineer call to make a Survey on my floors. (No obligation)

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Institution .....  
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## What's New ...

### Collect Wastepaper ... Handle Trash ... Move Supplies



### YOUNGS Janitor Carts do all three!

This Janitor Cart converts instantly from bag carrier to a sturdy platform truck.

Canvas bag holds over 5 bushels; 140 sq. in. steel deck can safely handle 300 lb. loads.



Model D-90

- YOUNGS Janitor Carts roll easily and quietly, whether the load is trash, wastepaper or supplies. They will not mark the finest floors. Waste baskets and trash cans can be emptied into the widely outstretched canvas bags quickly and without spill.
- Light in weight, YOUNGS Janitor Carts are readily carried on stairs. Ball-bearing swivel casters in front allow them to be steered with little effort.
- Available in two platform models; Model D-93 (not shown) has approximately twice the D-90 capacity in all respects. Five non-platform styles also available.

Write for free catalog S-48

**UTILITY TRUCKS FOR SCHOOLS**

**THE PAUL O. YOUNG CO.**  
School Truck Division  
LINE LEXINGTON, PENNA.

### Foldcraft Banquet Table Features Rugged Construction

Strength, attractiveness and ease of operation are offered in the new Foldcraft Banquet Table. It is built to withstand hard and repeated use and folds



smoothly for easy stacking. Steel channel side rails and cross rails, a 2 1/8 inch apron on all sides, and welded and riveted one inch tubular legs of 16 gauge steel ensure long life. Special foolproof leg-locking toggles, protective plastic edge molding, non-skid rubber tipped feet and wood end rails that prevent scratching when stacked are other construction features of the new moderately priced table.

Two tops are available for the new Foldcraft. A high pressure plastic laminate on 3/4 inch exterior plywood with plastic balancing sheet on the underside is available in gray, green, tan, red or yellow. The other top is one inch Superwood of tempered masonite type material. The new table comes in four sizes to meet any requirements: 30 by 72 and 30 by 96 inches as well as 36 by 72 and 36 by 96 inches, 29 inches high. Juvenile heights of 27, 24, 22 and 20 inches are also available in the same sizes. Haldeman-Homme Mfg. Co., 2580 University Ave., St. Paul 14, Minn.

For more details circle #872 on mailing card.

### Dispenser for Wetting Agent

Calgon Rinse-Aid, a new non-foaming wetting agent to prevent spotting and filming of dishes and silver in the dishwashing process, can now be accurately dispensed with the new automatic dispenser. The concentrate is introduced directly into the rinse line through the 6 by 12 by 14 inch unit, eliminating the need for diluting the solution, or for a pump.

Rinse-Aid breaks the surface tension of the water, making it drain away in sheets without leaving any drops behind to spot or leave a film on dishes or silver. The product is tasteless, odorless and non-toxic and does away with any necessity for dipping or toweling. Signal lights indicate when the dispenser is in operation and clear plastic doors allow a constant check on concentrate level. A reservoir keeps Rinse-Aid flowing into the rinse line while a new bottle is being put in place. Calgon, Inc., 323 Fourth Ave., Pittsburgh 30, Pa.

For more details circle #873 on mailing card.

(Continued on page 72)

Provide the means for Feminine Discreetness

Women are discreet instinctively.

**Sanibag**

SANIBAG method of quick, modest disposal of sanitary napkins, is practically a must in motels, schools, hotels, restaurants, office and public buildings.

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## Owens-Illinois' NEW SOLAR SELECTING Glass Block cooler in hot weather

Owens-Illinois new solar selecting Glass Block No. 80-F has a lower surface temperature during hot weather. It acts like a mirror reflecting a good portion of the direct hot rays from the sun, and at the same time transmits cool light reflected from the ground.



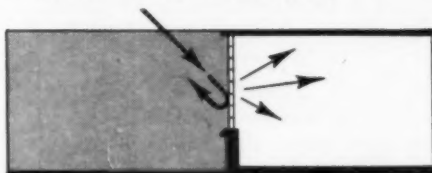
Because of its light-selecting principles this new block has a much lower surface brightness than other glass block. Maximum surface brightness as measured at the Daylighting Laboratory is less than 1400 foot-lamberts.



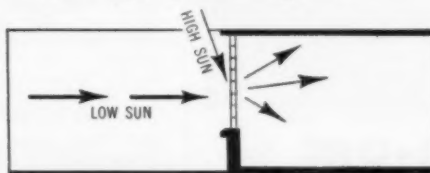
Thermocouples applied to the face of the 80-F block during hot weather (outside temperature 90°) showed that the roomside surface temperature was 14 degrees less than a conventional type light-directing block.



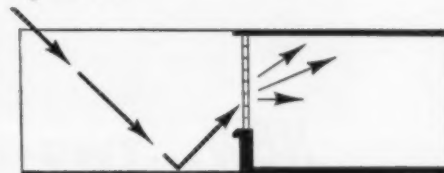
A similar test using a portable pyrometer confirmed the findings of the test using thermocouples by showing the same 14 degrees lower temperature on the roomside surface of the 80-F glass block.



**Rejects hot summer sun**—This diagram shows how the 80-F block reflects a major portion of the light from the sun at the critical 45° angle thus reducing brightness and solar heat transmission during hot weather.



**Uniform light transmission**—Prismatic design is selective and controls the amount of light transmitted from the various sun positions, thereby providing more uniform light transmission all day long.



**Transmits ground-reflected light**—This diagram shows how the 80-F transmits the cool light reflected from the ground. This feature is especially important when the sun is not on the fenestration.

**Complete  
Information available**

Send for the free, technical bulletin that gives the details. Just write "No. 480F" on your letterhead and mail to Kimble Glass Company, subsidiary of Owens-Illinois, Dept. CU-12, Box 1035, Toledo 1, Ohio.

OWENS-ILLINOIS GLASS BLOCK  
AN **I** PRODUCT

**OWENS-ILLINOIS**  
GENERAL OFFICES • TOLEDO 1, OHIO

## What's New . . .

### Simoniz Maintenance Products for Institutional Use

The line of Simoniz maintenance products has recently been made available for commercial and institutional maintenance. Included are Simoniz Heavy Duty Floor Wax, Simoniz All Purpose Floor Cleaner, Simoniz Non-Scuff Floor Wax, Simoniz HiLite Furniture Polish and Simoniz Triple "A" Paste Floor Wax. The first three products are available in 1, 5, 30 and 55 gallon sizes. Furniture polish is supplied in light and dark for the desired finish, in quart bottles. The paste floor wax is contained in five pound triple tight closure cans. Simoniz Company, Commercial Products Division, 2100 Indiana Ave., Chicago 16.

For more details circle #874 on mailing card.

### CinemaScope Lens for Standard Projectors

CinemaScope can now be brought to school film showings through a new 16 mm projection lens. The lens is adaptable to all standard 16 mm sound projectors. The screen width of regular 16 mm films can be doubled with the new lens.

The B&L lens combines a regular projection lens with the CinemaScope lens in one unit. For CinemaScope showings it is only necessary for the operator to remove the regular lens and insert

the B&L lens and adapter. Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N.Y.

For more details circle #875 on mailing card.

### Posture Chair for Business Classrooms

A tamperproof posture chair has been designed especially for use in business



training classrooms. The indestructible base is welded into one sturdy piece for strength and long wear. Four adjustments are possible on the back and seat to accommodate the chair to students of varied stature. Seat and back are upholstered and are available in a wide selection of colors. Desks of America, Inc., Bridgeport 6, Conn.

For more details circle #876 on mailing card.

### Orange Cake Quickly Made With Mix

Orange Cake can now be made without fuss or bother. Pillsbury's Orange Cake Mix contains tiny tidbits of fresh, tree-ripened fruit. It is only necessary to add water and bake to produce a light textured cake with natural fruit flavor. Each 6/5 case will produce 48 eight inch layers, 456 one and one-half ounce cupcakes or 540 two by three inch cuts of sheet cake. Pillsbury Mills, Inc., Minneapolis 2, Minn.

For more details circle #877 on mailing card.

### Vinyl-Clad Door in Seven Colors

A decorative as well as functional door is now available in Kawneer Vinyl-Clad Flush Doors. Laminated to an aluminum backing sheet, the vinyl is abrasion and mar resistant, providing a highly decorative yet sturdy door. The laminate is impervious to spilled liquids and is easily cleaned with soap and water. Available in seven colors, the vinyl is offered in several finishes.

The door has sandwich construction with a honeycomb core to give it light weight with rigidity. The door is highly moisture-resistant with aluminum faces double lapped at the top edge and sealed with mastic. Kawneer Co., Niles, Mich.

For more details circle #878 on mailing card.

(Continued on page 74)



## NEW...TWO-IN-ONE DORMITORY CHEST BED

Ideal for use in dormitory room, where space is a factor. Bed is standard dormitory width, 3'0" x 6'6" with extremely durable and comfortable spring construction. Chest is 36" wide x 20" deep x 15" high—has two large, deep drawers. Bed ends and chest are made of solid Canadian birch, finest quality and finish. Mounted on rubber wheel ball bearing casters to facilitate moving.

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## The **DON** Display of POTS and PANS is a Sight to See!

There's a tremendous selection of every type of pot or pan on display in the Exhibition Hall at DON headquarters. In your DON salesman's catalog there is a picture of each of these pots and pans. Broiling pans, baking pans, frying pans—big pots, little pots, medium pots—of steel, copper and aluminum.

Yes, here you'll find hundreds of pots and pans to fill your needs! You name it — DON has it: Stock pots, sauce pots, Bain Marie pots, utility kettles, double boilers, transfer dippers, mixing bowls, gelatin molds, steamers, egg poachers, roasters, french fryers, doughnut pots, skillets, sauce pans, frying pans, baking pans, cheese pans, bun pans, meat loaf pans, steam table pans, pudding pans, Denver sandwich pans, omelet fry pans, pie pans, display pans, salad pans, saute pans—JUST TO NAME A FEW! And on each—SATISFACTION IS GUARANTEED! Don't you need a pan now?

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# BETTER *Light* FOR COLLEGE LABS

## New Trend In Research Buildings Involves Window Walls of Coolite Wire Glass

The importance of good daylighting in colleges and universities is reflected in these bright walls of Coolite, Heat Absorbing and Glare Reducing Glass—here illustrated in the new Borden Company laboratory. Interiors are flooded with natural illumination free of the harmful effects of "raw" sunlight that cause optic and physical discomfort.

4800 sq. ft. of Coolite makes these new laboratories appear larger, brighter, more comfortable . . . with plenty of conditioned light for the most exacting scientific work.

Yet, the proven ability of Coolite to absorb unwanted solar heat helps keep interiors cooler. Occupants see better, feel better, work better and more accurately in areas glazed with Coolite.

Coolite Wire Glass protects against shatter damage, resulting from fires. This approved Fire Retardant No. 32 tends to bottle up and thus prevent the spread of flames. And the Coolite wire glass adds beauty to the exterior—the clean, blue hue harmonizes with the crisp, modern design . . . its benefits minimize need for unsightly painted screens or blinds.

For maximum comfort and protection specify Mississippi Coolite Heat Absorbing and Glare Reduced Wire Glass. Available through leading distributors of quality glass. Mississippi offers a wide variety of translucent, light diffusing glass patterns for every glazing requirement.



Architects: Skidmore, Owings & Merrill  
Consulting Engineer: Harry H. Bond  
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### Wet-Dry Vacuum for Floor Maintenance

A new heavy duty unit for floor maintenance is available in the West Vac-



mobile. It is a wet-dry vacuum cleaner with large non-marking rubber wheels and handle bar for convenience in use. It is designed to glide over carpet edges and sills and to climb ramps and stairs without lifting. It is completely maneuverable for rolling between desks, furniture or in aisles.

Powered by a 1/4 h.p. motor, the Vacuumobile has a safety by-pass feature for picking up water and detergents from floors. Recovery capacity is 12 gallons or 1 1/2 bushels of dirt. The ball bearing Master Tool available with the Vacuumobile is equipped with slide-on adapters to meet every floor cleaning need. The unit provides complete floor maintenance facilities. **West Disinfecting Co., 42-16 West St., Long Island City 1, N. Y.**

For more details circle #879 on mailing card.

### Snow Thrower Has Special Raker Bar

The new Champion Snow Thrower has a special raker bar that quickly cuts up heavily packed or deeply piled snow. It is especially designed for use around institutions. The raker bar consists of six flat steel teeth mounted on the Champion whirling fan. The bar is so arranged that it cuts the packed snow into small pieces that can be easily thrown to one side by the fan.

The new rotary type machine is self-propelled and powered by a 2 1/2 h.p. gas engine. It is designed to clear a path 20 inches wide through any depth or type of snow. Snow is thrown over a large area and the throwing angle is adjustable. Other features include open construction to prevent clogging or stalling; working parts protected by a wrap-around hood; adjustable handlebar; independent clutch for easy starting; two forward speeds for smooth operation, and 16 inch solid rubber wheels that grip firmly on all surfaces. **Jari Products, Inc., 2990 Pillsbury Ave., Minneapolis 8, Minn.**

For more details circle #880 on mailing card.

### Mobile Frigid Cabinet Is Self-Contained Unit

A completely self-contained unit, the new mobile Frigid Cabinet has an efficient compressor located in the bottom. It is constructed entirely of lightweight aluminum and may be used as a permanent fixture or as a mobile unit. The new Crescent "Directed-Flow" air circulation principle used in the unit provides an even flow of cold air throughout the cabinet with no areas missed.

The new cabinet has adjustable shelf or tray supports to accommodate the width of any generally used tray. Clearance between trays may be adjusted to handle beverages or pans of varying heights. The cabinet can be used for cold foods while awaiting service, or as an all-purpose refrigerator. For food transport, the cabinet is easily rolled to the desired area and plugged into any electrical outlet. **Crescent Metal Products, Inc., 18901 St. Clair Ave., Cleveland 10, Ohio.**

For more details circle #881 on mailing card.

### Hot Chocolate Vendor Gives Ingredient Control

Approximately five hundred cups of hot chocolate can be dispensed from one filling of the new Stoner Hot Chocolate Vendor. Ingredient buttons on the control panel allow up to 20 per cent extra portions of powdered cream, sugar and chocolate. Dispensing cams are adjustable to vend from seven to fourteen grams of chocolate, thus permitting ingredient control.

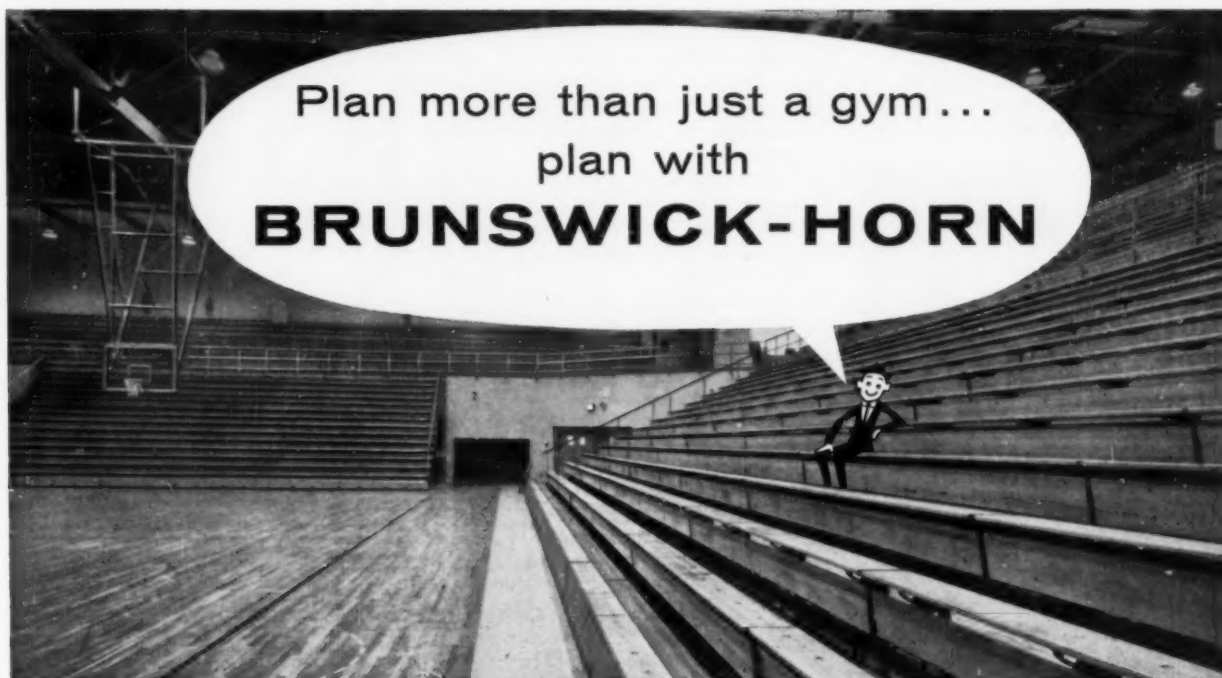
Chocolate is mixed in a heated ceramic bowl which is easily removed without



tools for quick cleaning. The standard coin mechanism operates on one nickel for five cent sales or one dime or two nickels for ten cent sales. Coin changers are available. Six inch legs provide ample floor clearance for floor cleaning and screw type levelers give firm footing on uneven floors. The Hot Chocolate Vendor is available in Standard Stoner bonderized colors including tan, green, gray, blue and red bronze. **Stoner Mfg. Corp., Aurora, Ill.**

For more details circle #882 on mailing card.

(Continued on page 76)



**Brunswick-Horn** Folding Gymnasium Seating locks secure opened or closed . . . cross-braced understructure stops sway or shake. In closing, foot boards tilt to spill litter on floor for fast, efficient removal.

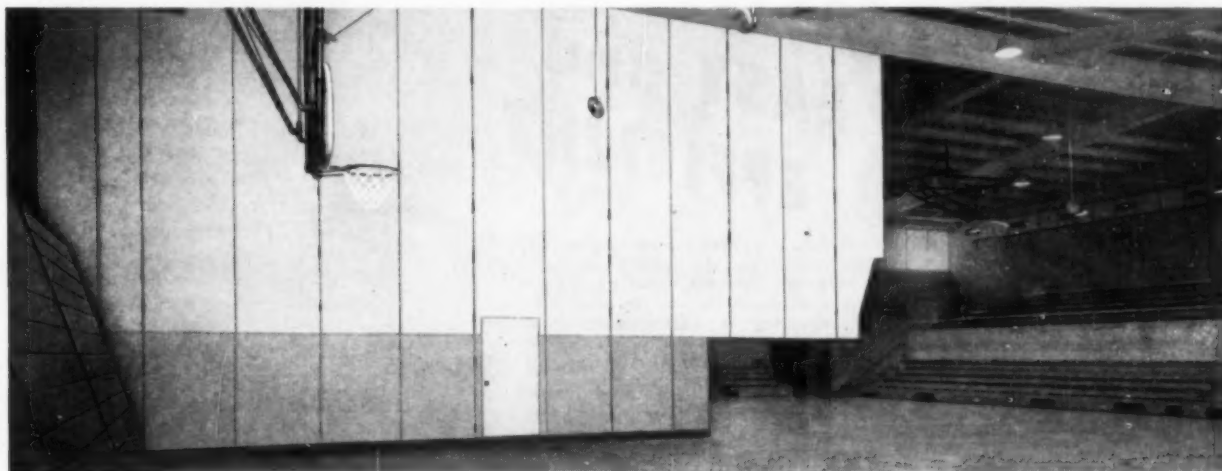
■ **Today's gym is multi-purpose** . . . combining school activities with the athletic, civic and cultural needs of the community.

Putting the gym on such a sound business basis is a result of pre-construction planning with Brunswick-Horn. As proof, you'll find Brunswick-Horn gym equipment (Folding Gymnasium Seating and Folding Partitions) specified by leading architects everywhere.

So remember—when it comes to designing *your* new gym . . . Brunswick-Horn planning service is yours for the asking. Write today for full information.

**As for balcony seating**, let Brunswick-Horn plan with you to eliminate line-of-sight problems and in turn:

- Minimize construction costs
- Provide maximum seating capacity and
- Assure top spectator comfort and safety.



**Brunswick-Horn** Folding Partitions convert one gym into two in a matter of minutes . . . lock quick and quiet without bolts . . . automatically seal with floor.

See SWEET'S 22 J and 21 d  
Ho Ho

THE BRUNSWICK-BALKE-COLLENDER COMPANY

Horn Division • Marlon, Virginia



## What's New . . .

### Tubular Storage Trucks for Clean Dishes

Model No. 1400 is a Clean Dish Storage Truck with stainless steel tubing frame and 18 gauge stainless steel shelves,



ends and center partitions. The truck is furnished with or without continuous rubber bumper and handle bumpers. The shelf slants to the center at such an angle that stacks of plates on the shelf will not tip when the truck is moved. The truck is 27½ by 37¼ inches in size, without bumpers, with an overall height of 37½ inches. Shelves on each side are 10½ by 32¼ inches. A removable shelf 25 by 25 inches of 18 gauge furniture steel or 18 gauge stainless steel can be supplied to rest on the base of the tubular frame to

carry trays, cup racks or glass racks. Removable dividers of stainless steel can be furnished for specified spaces. The cabinet portion of the truck is welded together and the cabinet itself is bolted to the chassis.

When furnished with top covers and side covers the same model is known as Model 1401 stainless. Covers are fabricated of 20 gauge stainless steel and are attached to the cabinet by stainless steel hinges. When closed the side covers are held firmly by spring type catches. The truck rolls easily when pushed by the conveniently placed handle. **Jarvis & Jarvis, Inc., Palmer, Mass.**

For more details circle #883 on mailing card.

### Fiberglass Draperies in Contemporary Prints

Drapery materials of Fiberglass are now being offered in contemporary hand blocked prints. They are also available in heavy bouclé. The new draperies are easily washed, do not fade, dry rapidly and require no pressing. They do not shrink, stretch or mildew and are flame-proof. Fiberglass is also effective as insulation against heat or cold. Special designs and specifications are also available in Fiberglass draperies. **Williamsburg Drapery Co., Inc., 819 W. Chicago Ave., Chicago 22.**

For more details circle #884 on mailing card.

### Chlorinated Detergent for Electric Dishwashers

Two new formulations of a chlorinated detergent for electric dishwashers are now available. Known as Super Pexide and Pexide, the products eliminate water spotting and are effective in hard or soft water.

Water spotting is eliminated by a new wetting agent, new synergistic developments which assure low alkalinity and freedom from metal attack and electrolytic action, absence of low-priced fillers and reduced surface tension providing complete water run-off in both wash and rinse cycles. Both Super Pexide and Pexide are designed to remove stubborn stains from ceramic and plastic ware when used over several washings. Scale deposits within the machine are also dissolved after several washings when these new products are used continuously. Super Pexide and Pexide are available in cases of twenty 44 ounce package control cartons, 325 pound barrels and 125 pound kegs. **Peck's Products Co., 610 E. Clarence St., St. Louis 15, Mo.**

For more details circle #885 on mailing card.

### Toasting Appliance for Buns and Muffins



The Savory RotoBun is a counter toasting appliance designed especially for toasting hamburger buns, English muffins and similar foods. It is 11½ inches wide, 22 inches deep and stands 15½ inches high. It has a capacity of four half buns per minute and operates on standard current, drawing minimum power. It can be plugged into existing electric currents and provides supplementary service to the Savory Conveyor-Type Toasters, or service where the demand is small, as in lunchrooms or other areas serving a limited number of meals.

Constructed of stainless steel, it has a horizontal conveyor moving from front to back under the single heating element. Toasted buns or muffins drop off the conveyor on to a chute which delivers them to the front of the machine. Heat is controlled by an infinite control switch and a lever device. **Savory Equipment, Inc., 120 Pacific Ave., Newark 5, N. J.**

For more details circle #886 on mailing card.

(Continued on page 78)

## MAKE FLOOR CLEANING FAST, EASY and EFFICIENT



Floor-King  
Mopping Outfit  
for mops to 36 oz.

. . . with Geerpres mop wringers. Mops last longer and do more work because Geerpres Interlock gearing lets you wring mop just the way you want it without twisting or tearing. Light handle pressure gives controlled, powerful squeezing action to force mop down and eliminate splashing.

Geerpres wringers last longer because they are ruggedly constructed of the finest materials. Electro-plated finish on all wringers is exclusive with Geerpres. Yet, they are light, compact and easy to handle on ball-bearing rubber casters.

Sizes and styles for every mopping need. Complete line of accessories, too. Write for Catalog or see your jobber.

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**SUBJECT:**

# Budgetary control - how to simplify and make more effective.

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Your telephone directory will put you in contact with our representative in your community. Let him show you how the Burroughs Budgetary Accounting Machine makes possible simple form design . . . forms that are more compact, neat, and logically arranged.

He'll show you mechanized advantages, too, such as the "repeat" feature that reduces indexing work, and the positive form alignment of the Burroughs Budgetary Accounting Machine. You'll be impressed with the posting speed and simplicity of operation obtainable with this combination of right form and right machine for perfect budget control. Burroughs Budgetary Accounting Machine mechanically prevents posting errors caused by the operator's picking up previous balances incorrectly.

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Our special booklet on streamlining accounting and management reports is packed with helpful information on how the Burroughs Budgetary Accounting Machine simplifies budget ledger preparation and other accounting operations. Phone our local representative and ask for your copy, or write Burroughs Corporation, Detroit 32, Michigan.

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## What's New . . .

### Product Literature

- A **Specification Book on Hobart Food and Kitchen Machines** is available from The Hobart Manufacturing Co., Troy, Ohio. This comprehensive reference book gives complete detailed information on the full line of machines for food service from preparation through dishwashing.  
For more details circle #887 on mailing card.
- "Institutional Cooking Utensils in Revere Ware" are described and illustrated in a new folder issued by Revere Copper and Brass Inc., Rome Mfg. Co. Division, Rome, N.Y. Outstanding features of these copper clad stainless steel cooking utensils for institutional use are discussed in the folder and each point is illustrated. The line includes institutional sizes in all cooking utensils and there is a suggested list of combinations for various uses.  
For more details circle #888 on mailing card.
- The use of xerography to solve a big duplicating problem at the University of Nebraska is illustrated and described in a new brochure released by The Haloid Company, 2-20 Haloid St., Rochester 3, N.Y. The case history tells how multiple copies of forms, texts and booklets were made at minimum cost.  
For more details circle #889 on mailing card.
- The complete line of **Thurmaduke Food Service Equipment** is covered in the new 32 page catalog issued by Duke Manufacturing Co., 2317 N. Broadway, St. Louis 6, Mo. The latest models of waterless food warmers in various types are featured as are many food warmer accessories designed to improve and speed up food service. Information is given on food warmer temperature settings best suited for each type of hot food and 70 illustrations are used to picture the complete line of food service equipment, including mobile conveyors, offered by the manufacturer.  
For more details circle #890 on mailing card.
- The **Harvard HMI Catalog** of custom-designed beds and divans is available from the Harvard Mfg. Co., Contract Dept., 6201 Woodland Ave., Cleveland 4, Ohio. How various combinations of a diverse number of interchangeable components can be combined to create over 100 different styles and sizes of beds and divans is discussed in the eight page catalog.  
For more details circle #891 on mailing card.
- The National Sanitary Supply Association, Inc., 139 N. Clark St., Chicago 2, has issued a new booklet on "The Care and Maintenance of Concrete Floors." The 12 page booklet describes the basic concrete floor and illustrates some of the more common faults due generally to improper construction or improper maintenance. Cleaning, finishing and daily maintenance tips for concrete flooring are discussed in the booklet.  
For more details circle #892 on mailing card.
- A new Mosaic pool planning guide, "Swimming Pools of Mosaic Tile," is available from The Mosaic Tile Company, Zanesville, Ohio. Form No. 158 is an eight page bulletin giving complete swimming pool construction details and ceramic tile specifications for pools and surrounding areas. Information presented follows closely A.A.U.U.S., N.C.A.A. and Y.M.C.A. regulations and standards for competitive pools.  
For more details circle #893 on mailing card.
- Full descriptive information on **Naturalite Dome Skylights and Ceiling Domes** is given in a new **Detail Data Manual** issued by Plastic Products of Texas, 1400 Cedar Springs Ave., Dallas, Tex. The story of Naturalite Domes, made of clear, colorless and white translucent Plexiglas, is supplemented by specifications and schematic drawings of the various styles and uses of these domes and skylights.  
For more details circle #894 on mailing card.
- The advantages of the new **Mackin Dual Control Visual Education Blinds** for daylight control as well as darkness control are discussed in a folder released by Mackin Venetian Blind Co., Mokense, Ill. Each feature of these blinds, developed to afford full range of light flexibility with ease of maintenance and handling, is covered in the folder, together with detailed specifications.  
For more details circle #895 on mailing card.
- The story of the **Benjamin Porcelain Chalkboard Surface** is told in an eight page report released by Benjamin Electric Mfg. Co., Des Plaines, Ill. Discussion of the development of this new chalkboard from research to latest laboratory test results is included in the booklet, as is information on its resistance to physical damage, erasure qualities, visibility of chalked image and other characteristics.  
For more details circle #896 on mailing card.
- A new catalog circular on **AerVoID Portable Vacuum Insulated Carriers** for storing and transporting hot soup, coffee, milk and other hot or cold foods and beverages is available from Vacuum Can Company, 19 S. Hoyne Ave., Chicago 12. Helps in selecting and ordering AerVoIDs include information on what an AerVoID is, data on vacuum insulation and descriptive details on the several units offered together with photographs of actual carriers and of the dispensing faucets employed.  
For more details circle #897 on mailing card.
- Educational program material used on television is now available for private showings in schools, libraries, and other institutions. Exclusive rights for non-theatrical and non-broadcast use of "You Art There" and "The Search" programs have been granted to Young America Films, Inc., 18 E. 41st St., New York 17. The material is offered in 16 mm. films.  
For more details circle #898 on mailing card.
- **Hotpoint Commercial Electric Cooking Equipment** is described in a comprehensive portfolio on the Glamour Line. Full descriptive information and specifications on all items in this complete line are given, with illustrations of units, parts and uses, and suggested kitchen layouts.  
For more details circle #899 on mailing card.
- The complete line of "**Chemical Porcelain Laboratory Sinks**" manufactured by The U. S. Stoneware Co., 60 E. 42nd St., New York 17, is described and illustrated in **Bulletin L-8**. The 20 page bulletin is printed in three colors and gives data on how these sinks are made, including dimensional drawings and charts for sinks, outlets, drains and traps.  
For more details circle #900 on mailing card.
- The service, maintenance and repair of all Yale door closers are discussed in a new **Door Closer Maintenance Manual** available from the Yale Lock and Hardware Division of The Yale & Towne Mfg. Co., White Plains, N. Y. The manual includes complete descriptions and specifications of Yale repair parts and tools.  
For more details circle #901 on mailing card.
- A new 32 page illustrated booklet on the control of meat costs, the major item in most menus, has been published by Colonial Beef Co., 401 N. Franklin St., Philadelphia 23, Pa. Entitled "**How to Cut Food and Labor Costs**" the booklet discusses how meat costs can be cut or controlled without lowering quality or service, through portion control.  
For more details circle #902 on mailing card.
- **Catalog No. 19** covers the full line of "**Cecilware-Commodore Quality Products**." The 33 page booklet illustrates and describes the various types of coffee makers, griddles, broilers, fryers and other cooking equipment manufactured by Cecilware-Commodore Products Corp., 206 Canal St., New York 13.  
For more details circle #903 on mailing card.
- The complete line of **folding, portable tables** for schools and other institutions is described in a brochure released by Sico Mfg. Co., Inc., 6045 Pillsbury Ave. S., Minneapolis 19, Minn. A brief explanation of the Sico System of cafeteria seating is also included.  
For more details circle #904 on mailing card.
- The revised second edition of "**85% Magnesia Insulation Manual**" is available from the Magnesia Insulation Manufacturers Assn., 1317 F St., N. W., Washington 4, D. C. The 80 page book offers new engineering and product data on magnesia for insulation with an explanation of the chemical and physical properties of 85 per cent magnesia. New conductivity, density and fire-resistance data is included with a section devoted to recommended application techniques for hot piping and equipment.  
For more details circle #905 on mailing card.

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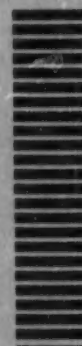
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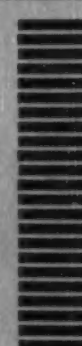
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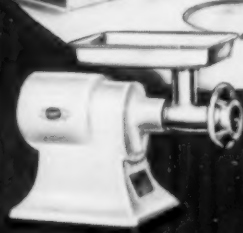
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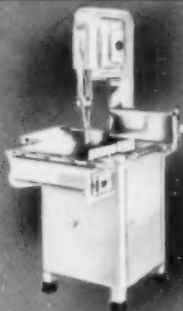
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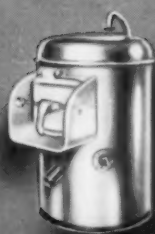
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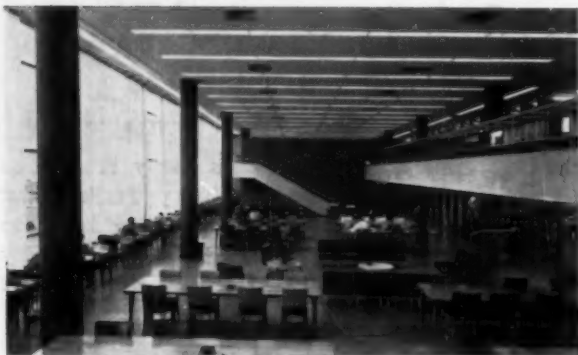
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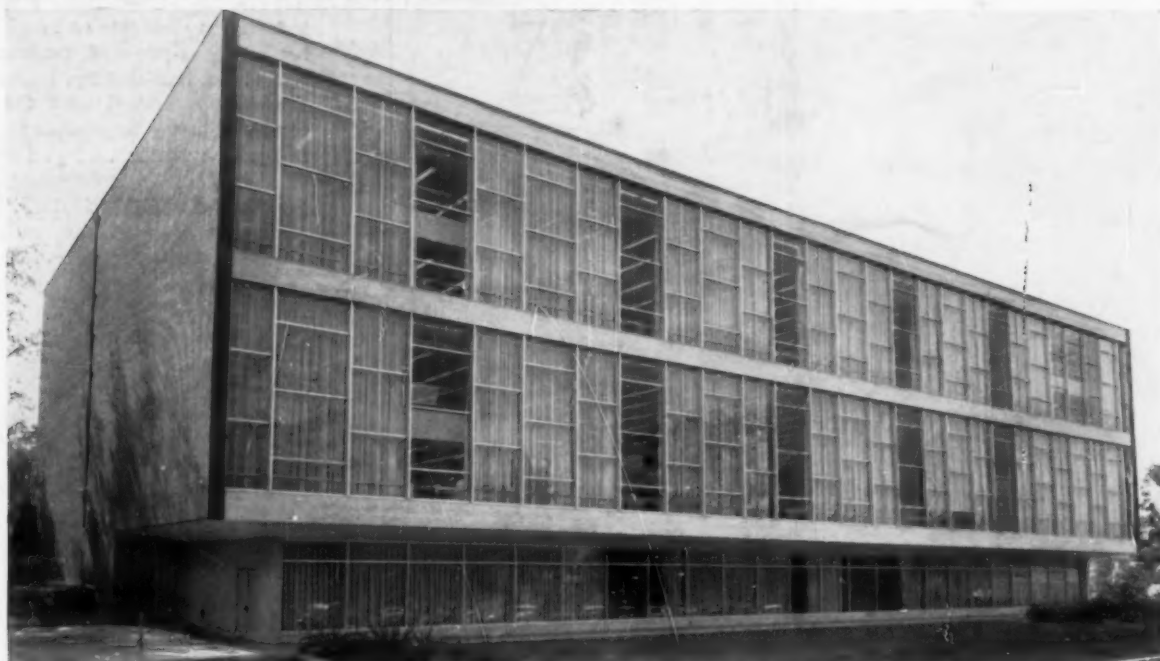
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